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Art. I. *The System of the World.* By P. S. Laplace, Member of the National Institute of France. Translated from the French by J. Pond, F. R. S. 2 vols. 12mo. pp. xii. 706. Price 7s. R. Phillips. 1809.

TO give general readers a familiar view of an abstruse scientific subject, is far from an easy task. The class of men who usually undertake it, are most of all unfit. They read works of science, not for instruction or delight, not because they wish to comprehend the whole or the parts of a subject, or have any peculiar turn for cultivating it; but because they *must* write: read till their memories are loaded to the utmost, and then sit down to unburden themselves by writing a book,—in which you are sure to find them superabundant in illustration where the topic carries its own evidence, while they run over a dark and intricate branch of the discussion with the rapidity of timid children through a gloomy churchyard, and leave the reader to get out of his difficulty as he can. Authors of this class are now very numerous in England; and indeed, to give Sir Richard Phillips his due, it is but fair to state that he has done more to encourage them than any other individual, and has consequently a pretty well fed and well clothed tribe of them constantly in his service.—Another class of popular writers on abstruse subjects comprises those who have an extensive and correct, if not a profound, acquaintance with the science on which they treat; who can explore its dark paths, and penetrate its difficulties; who have considerable attainments, though perhaps little invention; and are distinguished for their knowledge, taste, and judgement, though not for their genius. This class is far less numerous than the former; though their labours are incomparably more useful. The knowledge they have acquired does not float loosely in their minds, so as easily to evaporate; nor is it lodged so deeply, as to be drawn up with difficulty. It is stored up for use, and it is ready for use. Authors of this description,

remembering the comparative lights and obscurities, facilities and obstructions, that marked their own progress in the science, are not very likely to leave the student to grope in the dark, or to withhold from him the assistance of correct and definite illustration where it may be most needed. Unfortunately, there are fewer writers of this class on the science of astronomy, than on any other we recollect. Only two, perhaps, have an unexceptionable title to be included in it; Bonnycastle in England, and Biot in France. The works of Keill, Lacaille, Gregory, and Vince, though useful in their kind and degree, are too theoretic to come under the same denomination.—Advancing considerably higher, we reach the class, to which the author of the treatise before us is so distinguished an ornament. It is constituted of the men of real genius, who have been enabled to make discoveries that would not disgrace angelic intelligences, but who, with a most laudable condescension, are endeavouring to bring the results, and indeed the *nature* of those discoveries, within the comprehension of ordinary students. In this class we may also place Newton, Euler, D'Alembert, and Lagrange; some of whose works are, strictly speaking, of the popular, familiar kind, and evince that they can stoop as well as soar--stoop, to augment the knowledge of others, and multiply their inlets to happiness;—soar, to make new discoveries for themselves, and obtain a delight unknown to all but men of genius, and only to be excelled here by the joys imparted to good men in communion with God. If writers of this class do not generally succeed according to their wishes, it is, partly because the process of invention and discovery is widely different from the order of instruction,—partly because that expansion of intellect by which the whole of a vast subject is seen and comprehended at once, is apt to reduce to less than their real magnitude the minuter parts on which a common mind might be compelled to rest,—partly because it must require a stock of patience far greater than usually falls to the lot of man, to exhibit in many aspects what the inventor sees at once, with an intuitive glance, in every shape it can assume,—and partly because some of the topics are really too abstruse and refined, to admit of being perspicuously stated in popular language.

The 'Exposition of the System of the World' by M. Laplace, excited so much attention, and furnished so much valuable instruction to all who read it, on its first publication in 1796, that we have often wondered it should so long remain an alien to the English language. It is therefore gratifying to see it naturalised, though far out of due time. For such a work is by no means unnecessary in this coun-

try, where several of its discussions are still in a great measure unknown. Laplace offers himself as a familiar writer on Physical Astronomy, with peculiar claims to regard. With the exception of Newton, he has made more important discoveries in this most abstruse department of science, than any philosopher of any age; and some of those discoveries completely destroy the few plausible objections which had ever been advanced against the Newtonian system. Indeed, we do not scruple to say, that, next to Archimedes and Newton, no man ranks higher as an inventor, or has made more brilliant and important discoveries in mathematics, than Laplace: and we may add, that Laplace, like Newton, does not more deserve celebrity for the depth of his penetration, the splendor of his genius, and the richness of his invention, than for his extreme modesty. One great peculiarity, and in fact one great excellence, of this treatise is, that its author is never tempted by the illusions of vanity and self-love to assign to those branches of the science, in the cultivation of which his labours have done almost every thing, a greater proportion in the general scale of the performance than they really deserve. Another excellence is manifested in the logical precision of the general arrangement, and the scrupulous care with which strong difficulties are overcome, and plausible obstacles removed. A third is, the chaste simplicity, the classical purity, freedom, and elegance of the style: a quality of the work, which we regret to say is not transfused into the English edition. The principal defect arises from the difficulty found by a man of superlative talents in lowering himself to the task of familiar exhibition. Besides this, the prejudices of British mathematicians, from all of which we do not pretend to be entirely free ourselves, would induce us to lament, that some of the most abstruse disquisitions are not rendered a little easier of comprehension, by the friendly aid of a geometrical figure, or an algebraical formula. But it is time we should proceed to an analysis of the performance.

Laplace divides his exposition of the system of the world into five books, in which he treats of the apparent motion of the heavenly bodies, their real motion, the laws of motion, the theory of universal gravitation, and the history of astronomy. The first book, on the apparent motions of the celestial bodies, is subdivided into fourteen chapters, treating of the diurnal motion of the heavens, the sun and its proper motion, time and its measure, the moon's motion, phases, and eclipses, the planets and particularly Mercury and Venus, then Mars, Jupiter, and his satellites, Saturn, his satellites and ring, Uranus and his satellites, comets, fixed stars and

their motions, the figure of the earth and the variation of gravity at its surface, the ebbing and flowing of the sea, the terrestrial atmosphere, and astronomical refraction. The disquisitions in this book are delivered with much perspicuity: but, as it contains little that is altogether new, we shall quote only one short passage.

'I ought, when speaking of the observations of the pendulum, to call the attention of natural philosophers to the two following circumstances: One is, the slight resistance which bodies, in changing their temperature, appear to me to oppose to their change of volume, nearly as water resists its conversion into ice, and can retain its form at several degrees below zero. It is then sufficient to agitate it to render it solid. In the numerous experiments on the dilatation of bodies, which I made with Lavoisier, we were sometimes obliged to give them a slight concussion to make them take the form proper to their temperature. The second object relates to the invariable pendulums which are used to determine the difference of gravity on various places of the earth. If the rod of the pendulum is of steel, its to be feared that the effect of terrestrial magnetism should become complicated with that of gravity; and as the object is to appreciate very small quantities in these experiments, it is important to be assured that this effect is insensible.' Vol. I. p. 150.

The second book, devoted to the real motions of the heavenly bodies, contains seven chapters, which treat of the rotatory motion of the earth, the motion of the planets round the sun, the motion of the earth round the sun, the appearances occasioned by the earth's motion, the figures of the planetary orbits and the law conformably to which they move round the sun, figures of the cometary orbits and the laws regulating their motion round the sun, the laws of the motions of the satellites about their respective primary planets. This book exhibits much luminous and forcible argumentation, on subjects, which, though they are generally admitted, have been often loosely treated. We select the following as a specimen.

'Shall we now suppose the sun accompanied by the planets and satellites in motion round the earth, or shall we imagine the earth and other planets to revolve round the sun? The appearances of the heavenly motions are the same in the two hypotheses, but the second should be preferred, for the following considerations.

'The masses of the sun and of several of the planets, are considerably greater than that of the earth; it is much more simple to make the latter revolve round the sun than to put the whole solar system in motion round the earth. What a complication in the heavenly motions would the immobility of the earth suppose! What a rapidity of motion must be given to Jupiter, to Saturn, which is ten times farther from the sun than we are, and to Uranus which is still more remote, to make them every year revolve round us, at the same time they are revolving round the sun. This complication and this rapidity of motion disappear

by transferring the motion to the earth: a motion conformable to the general law, by which the small celestial bodies revolve round the large ones which are placed in their vicinity. The analogy of the earth with the planets confirms this hypothesis; like Jupiter it revolves on its axis and is accompanied by a satellite. An observer on the surface of Jupiter, would conclude that the solar system was in motion round him, and the magnitude of that planet would render this illusion less improbable than for the earth. Is it not therefore reasonable to imagine that the motion of the solar system round us, is likewise only an illusion. Let us transport ourselves in imagination to the surface of the sun, and from thence let us consider [*contemplons*, contemplate] the earth and the planets. All these bodies will appear to move from west to east; already this identity in the direction indicates a motion of the earth; but that which demonstrates it evidently is the law which exists between the times of the revolutions of the planets, and their distance from the sun. They revolve round it slower as their distances are greater, and in such a manner that the squares of the periodic time are in proportion to the cubes of their mean distances. According to this remarkable law, the length of a revolution of the earth, supposing it in motion round the sun, should be exactly a sidereal year. Is not this an incontestable proof that the earth moves like the other planets and is subject to the same laws? For would it not be very strange to suppose the terrestrial globe, which hardly subtends a visible angle at the sun, immoveable amidst the other planets which are revolving round it, and that the sun should be carried with them about the earth?

'Ought not the force which balances the centrifugal force and retains the planets in their respective orbits, likewise to act upon the earth? and must not the earth oppose to this action the same centrifugal force? Thus the consideration of the celestial motions as observed from the sun, leaves no doubt of the real motion of the earth. An observer on the surface of the earth has another evident proof of its motion in the phenomenon of the aberration, which is a necessary consequence of it, as we shall now explain.' pp. 218—221.

Our author here gives a brief history of Roemer's discovery of the velocity of light, and of the aberration of the fixed stars; and then continues his argument for the truth of the Copernican system.

'The consideration of the celestial motions leads us, then, to displace the earth from the centre of the world where we had placed it, deceived by appearances, and by the natural propensity of man to regard himself as the principal object in nature. The globe which we inhabit is a planet in motion on itself and round the sun. In considering it in this point of view, all the phænomena are explained in the most simple manner, all the celestial motions become uniform, and the analogies are preserved. Like Jupiter, Saturn, and Uranus, the earth is accompanied by a satellite, it turns on itself like Venus, Mars, Jupiter, and Saturn, and probably the other planets; it like them borrows its light from the sun, and moves round it in the same direction, and according to the same laws. Finally the hypothesis of the earth's motion unites in its favour simplicity, analogy, and every thing which characterizes the true

system of nature. We shall see that following it in its consequences, the celestial phænomena are brought, even in their minutest details, to one single law, of which they are only the necessary developements. The motion of the earth will thus acquire all the certainty of which physical truths are susceptible. And it may result either from the great number and variety of phænomena which it explains, or from the simplicity of the laws on which it is made to depend. None of the branches of natural knowledge unite these advantages in a higher degree than the theory of the system of the world founded on the motion of the earth. This motion ennobles our conceptions of the universe, by affording for a measure of the distances of the heavenly bodies, an immense base—the diameter of the terrestrial orbit. By this we have accurately determined the dimensions of the planetary orbs. Thus the motion of the earth, after having, by illusions of which it is itself the cause, retarded our knowledge of the planetary *motion* [motions] for a great length of time, at last conducted us to them, and that in a more accurate manner than if we had been placed in the centre of their system.' pp. 227—229.

The concluding language of the author is, '*avec plus de precision, que si nous eussions été placés au foyer de ces mouvemens!*'

Book the third, on the laws of motion, has five chapters, in which the author discusses the subjects of Forces and their composition, the motion of a material point, the equilibrium of a system of bodies, the equilibrium of fluids, and the motion of a system of bodies. The following extract, notwithstanding its length, will be read with delight by those, who can appreciate the difficulty of the investigation which the amazing skill of our author enables him to exhibit in a shape of such comparative simplicity and elegance.

'If the curve be described by virtue of a force directed to a fixed point, this force may be decomposed into two, one according to the radius of curvature, the other according to the element of the curve. The first is in equilibrio with the centrifugal force, the second augments or diminishes the velocity of the body, this velocity therefore continually varies. But it always is such that *the areas described by the radius vector about the origin of the force, are proportional to the times; and reciprocally, if the areas traced by the radius vector about a fixed point are proportional to the times, the force which solicits the body will always be directed to this point.* These fundamental propositions in the theory of the system of the world, are easily demonstrated in the following manner:

'The accelerating force may be supposed to act only at the commencement of each instant during which the motion may be supposed to be uniform, the radius vector will thus describe a small triangle. If the force ceased to act in the following instant, the radius vector would trace in this new instant, a new triangle equal to the first, because the triangles having their vertex at the fixed point which is the origin of the force; their bases situated on the same straight line will be equal, since they are described with the same velocity during two instants which

are supposed equal, but at the commencement of this new instant, the accelerating force combining itself with the tangential force of the body, makes it describe the diagonal of a parallelogram whose sides represent these forces. The triangle which the radius vector describes in virtue of this combination of forces is equal to that which it would have described without the action of the accelerating force, for these triangles have for a common basis the radius vector at the end of the first instant, and the vertex of each is on a straight line parallel to this basis. The areas, therefore, described by the radius vector, in the two consecutive instants, are equal to each other, and consequently the sector described by the radius vector increases as the number of these instants, or as the times. It is evident that this is only true inasmuch as the accelerating force is directed to one fixed point, otherwise the triangles which we have considered, will not have the same base and the same height: thus the proportionality of the areas to the times, demonstrates that the accelerating force is constantly directed to the origin of the radius vector.

'In this case if a very small sector be imagined to be described during an extremely short instant of time, and from the first extremity of this sector, a tangent be drawn to the curve, and that the radius vector drawn from the origin of the force to the other extremity of the sector, be prolonged till it meet this tangent, then the part of this radius intercepted between this curve and the tangent, will evidently be the space described by the central force.

'In [By] dividing the double of this space by the square of the time, we obtain an expression for this force; but the sector is proportional to the time; the central force, therefore, is, as the part of the radius vector intercepted by the curve and the tangent, divided by the square of the sector; strictly speaking, the central force in different points of the curve is not exactly equal to these quotients, but it approaches the nearer to them as we take the sectors very small, so that it is exactly equal to the *limits* of these quotients. The differential analysis gives this limit in a function of the radius vector, when the nature of the curve is known, and then that function of the distance is obtained to which the central force is proportional.

'If the law of the force is given, the investigation of the curve described presents greater difficulties. But whatever be the nature of the forces by which a body is animated, the elementary variations of its motion may easily be determined in the following manner:

'Let us imagine three fixed axes, perpendicular among themselves, [respectively perpendicular] the position of a body may be determined at any instant, by three co-ordinates parallel to these axes, [;] in [by] decomposing every one of the forces which act upon the point, into three others parallel to these axes, the product of the resulting force of all these forces, parallel to one of these co-ordinates, by the element of the time during which it acts, will express the increase of the velocity of the body, in the direction parallel to that co-ordinate; now this velocity, during this element, may be considered as uniform and equal to the element of the co-ordinate divided by the element of the time; the elementary variation, therefore, of this quotient, is equal to the preceding product. The consideration of the other two co-ordinates affords two similar equations; thus the determination of the motion of a body

becomes an investigation of pure analysis, which is reduced to the integration of three differential equations. This integration is easy when the force is directed to a fixed point; but often the nature of forces renders it [that] impossible; nevertheless the consideration of the differential equations leads to some interesting principles of mechanics, such as the following: The elementary variation of the square of the velocity of a body, submitted to the action of any accelerating forces whatever, is equal to double the sum of the products of each force, by [into] the small space which the body advances in the direction of that force in a small instant of time: from which it may be concluded that the velocity acquired by a heavy body, descending along a line or curved surface, is the same as if it had fallen vertically from the same height.' pp. 321—326.

In the fourth book is exhibited the theory of universal gravitation. This book is subdivided into fifteen chapters on the following topics: the principle of gravitation, the masses of the planets and the law of gravity at their surfaces, the perturbations of the elliptic motions of the planets, the perturbations of the elliptic motions of the comets, the perturbations of the lunar motions, those of Jupiter's satellites, the figure of the earth and other planets, that of Saturn's ring, the atmospheres of the celestial bodies, the tides, the stability of the equilibrium of the sea, the oscillations of the atmosphere, the precession of the equinoxes and the rotation of the earth's axis, the librations of the moon, and reflections on the law of universal gravitation. This book is the largest, and by far the most valuable in the treatise. Most of the subjects investigated are highly important, and they are treated with remarkable profundity of research, and (considering their natural abstruseness) with great felicity of illustration. The discussions that relate to the perturbations to which the celestial motions are liable, the figure of the planets, the tides, the precession, nutation, and libration, are peculiarly interesting: they are familiar, without being vague, and perspicuous, without being tedious; they are drawn from an immense stock of knowledge which the author has perfectly at command, and are often accompanied by reflections imbued with the spirit of genuine philosophy. On these points, however, as the research is necessarily drawn out to considerable length, we must refer to the work itself: our selections must relate to particulars which may be compressed into narrower compass.

While treating of the secular variations in the planetary motions, our great author deduces some most momentous results:

'Many interesting questions here present themselves to our notice. Have the planetary ellipses always been, and will they always be nearly

circular? Among the number of the planets have any of them ever been comets whose orbits have gradually approached to the circular form by the mutual attractions of the other planets? Will the obliquity of the ecliptic continually diminish till at length it coincides with the equator, and the days and nights become equal on the earth throughout the year? Analysis answers these questions, in a most satisfactory manner. I have succeeded in demonstrating that whatever be the masses of the planets, in as much as they all move in the same direction, in orbits of small excentricity, and little inclined to each other; their secular inequalities will be periodic, and contained within narrow limits, so that the planetary system will only oscillate about a mean state, from which it will deviate but by a very small quantity: the planetary ellipses therefore always have been, and always will be nearly circular, from whence it follows that no planet has ever been a comet, at least if we only calculate upon the mutual actions of the planetary system. The ecliptic will never coincide with the equator, and the whole extent of its variations will not exceed * three degrees.

'The motions of the planetary orbits and of the stars will one day embarrass astronomers when they attempt to compare precise observations separated by long intervals of time; already this difficulty begins to be manifest; it would be interesting therefore to find some plane that should remain invariable, that is, constantly parallel to itself during all these changes. There fortunately exists such a one, which possesses this remarkable property, to which the orbits of the planets may be referred, just as naturally as the motion of a system of bodies to its centre of gravity. This plane may easily be determined by the following rule.

'If, at any instant of time whatever, and upon any plane passing through the centre of the Sun, we draw straight lines to the ascending nodes of the planetary orbits referred to this plane, and if we take on these lines, reckoning from the centre of the Sun, lines equal to the tangents of the inclinations of these orbits to this plane; and if at the extremities of these lines we suppose masses equal to the masses of the planets multiplied respectively into the square roots of the parameters of their orbits, and by [into] the cosines of their inclinations; and lastly, if we determine the centre of gravity of this new system of masses, then the straight line drawn from the centre of the Sun to this point will be the tangent of the inclination of the invariable plane to the assumed plane; and continuing this line to the heavens, it will there mark its ascending node.

'Whatever changes the succession of ages may produce in the planetary orbits, and whatever be the plane to which they are referred, the plane determined by this rule will always be the same.' Vol. II. pp. 44—47.

The way in which Laplace infers the reality of the motion of the earth from the principle of gravitation, is so ingenious, cogent, and striking, that we cannot persuade ourselves to omit it.

'In considering the whole of the phenomena of the solar system, we may arrange them in the three following classes:

* 2° 42.

'The first embraces the motions of the centre of gravity about the foci of the principal forces which animate them.

'The second includes all that relates to the figure and oscillations of the fluids that surround them.

'And the third comprehends the motions of these bodies round their centres of gravity. It is in this order that we have explained the different phenomena, and we have seen that they are necessary consequences of the principle of gravitation. This principle has made us acquainted with a great number of inequalities, which it would have been impossible to have unravelled by observation alone; it has furnished us the means of subjecting the heavenly motions to sure and precise rules. The astronomical tables founded only on the theory of gravitation, borrow now from observation, only such arbitrary quantities as cannot otherwise be known, and we can only hope to add to their perfection by giving greater precision, both to our observations and our theory.

'The motion of the Earth, which had obtained the assent of astronomers, from the simplicity with which it explained the celestial phenomena, has received from the principle of gravitation a new confirmation, which has carried it to the highest degree of evidence of which physical science is susceptible. We may increase the probability of a theory, either by diminishing the number of hypotheses on which it rests, or by augmenting the number of phenomena which it explains. The principle of gravity has procured these two advantages to the theory of the motion of Earth. As it is a necessary consequence of it, it adds no new supposition to this theory; but to explain the apparent motion of the stars, Copernicus admitted three distinct motions, one round the Sun, another round itself, and a third motion of its poles round those of the ecliptic. The principle of gravitation makes them all depend on one motion impressed on the Earth, in a direction not passing through the centre of gravity. In consequence of this motion, it revolves round the Sun, and on its own axis, it at the same time takes a flattened form, compressed at the poles, and the action of the Sun and Moon upon this figure, produces a slow motion on its poles, round the poles of the ecliptic. The discovery of this principle has then reduced to the least possible number, the suppositions on which Copernicus founded his theory. It has besides the advantage of connecting this theory with all the celestial phenomena. Without it, the ellipticity of the planetary orbits, the laws which the planets and comets follow in their revolution round the Sun, their secular and periodic inequalities, the numberless inequalities of the Moon and of the satellites of Jupiter, the precession of the equinoxes, the nutation of the terrestrial axis, the motions of the lunar axis, and lastly the ebbing and flowing of the sea, would only be insulated and unconnected phenomena. It is really a circumstance deserving our admiration the manner in which all these phenomena, at first sight so unconnected flow from one law which connects them with the motion of the Earth so that, this motion once admitted, we are conducted by a series of geometrical reasoning to these phenomena. Each of them furnishes, therefore, a proof of its existence, and if we consider that there does not exist a single phenomena which cannot be referred to the law of gravity and that this law determines with the greatest exactness the positions and motions of the heavenly bodies through the whole of their course

there will be no reason to fear that its truth will be questioned, in consequence of any phenomena hitherto unobserved; and finally, when we see that Uranus with [and] its satellites lately discovered, obey and confirm the same law, it is impossible to refuse assent to these proofs, and not to allow that nothing in natural philosophy is more completely demonstrated than the motion of the Earth, and the principle of universal gravitation, in proportion to the masses, and inversely as the squares of the distances.' Vol. II. pp. 225—229.

The Fifth Book contains a concise but comprehensive sketch of the history of Astronomy. It has six chapters, wherein are given the histories—of the ancient astronomy so far as the epoch of the foundation of the Alexandrian school, of astronomy from that time to the Arabians, of the astronomy of the Arabians, Chinese, and Persians, of astronomy in modern Europe, and of the discovery of universal gravitation; the whole work concluding with considerations relative to the system of the world, and to the future progress of astronomy. Here, again, we should be tempted to make many extracts, but for the length to which we have already extended our citations. It would be unjust, however, to the public, to neglect quoting one or two additional passages.

After describing the spirit of the methods adopted by Newton, both in carrying on his researches and exhibiting their results to the world, and most liberally and justly assigning to the *Principia* of the British philosopher 'a pre-eminence over all other productions of human intellect', he presents the following observations on the relative advantages of geometrical synthesis and modern analysis:

'The preference of Newton for the synthetical method, may be explained by the elegance with which he connected his theory of curvilinear motion, with the investigations of the ancients on the conic sections, and the beautiful discoveries which Huygens had published according to this method. Geometrical synthesis has besides the property of never losing sight of its object, and of enlightening the whole path which leads from the first axioms to their last consequences, while algebraic analysis soon makes us forget the principal object, to occupy ourselves with abstract combinations, and it is only at the end that it brings us back to it. But in thus quitting the object of investigation, after having assumed what is indispensably necessary to arrive at the required result, by directing all our attention to the operations of analysis and reserving all our forces to overcome the difficulties which present themselves, we are conducted by the universality of this method, by the inestimable advantage of thus transferring the train of reasoning in mechanical questions,' [*by merely mechanical processes*, the translator should have said] 'to results often inaccessible to synthesis. The theory of the system of the world offers a great number of examples of this power of analysis to which this theory owes a degree of perfection which it would never have acquired if no other path had been followed than that traced by Newton. Such is the

fecundity of analysis, that if we translate particular truths into this universal language, we shall find a number of new and unexpected truths arise merely from the form of expression. No language is so susceptible of the elegance which arises from the developement of a long train of expressions connected with each other, and all flowing from the same fundamental idea. Analysis unites to all these advantages that of always being able to conduct us to the most simple methods. Nothing more is requisite than to apply it in a convenient manner by a judicious choice of unknown qualities, and by giving to the results the form most easily reducible to geometrical construction, or to numerical calculation. The geometricians of this century, convinced of its superiority, have principally applied themselves to extend its domain, and enlarge its boundaries.

'Geometrical considerations, however, ought not to be abandoned; they are of the greatest utility in the arts. Besides it is curious to imagine the different results of analysis represented in space [to describe for ourselves in space the various results of analysis;] and reciprocally, to read all the affections of lines and surfaces, and all the variations in the motions of bodies, in the equations which express them. This approximation of geometry and analysis, diffuses a new light over the sciences; the intellectual operations of the latter, rendered perceptible by the images of the former, are more easy to comprehend, and more interesting to pursue; and when observation realizes these images, and transforms these geometrical results into laws of nature, and when these, embracing the whole universe, display to our view [eyes] its present and future state, the view of this sublime spectacle, presents to us one of the most noble pleasures reserved for mankind.' Vol. II. pp. 348—351.

In his last chapter, our author, being dissatisfied with Buffon's bungling attempt at a hypothesis which would account for the formation of a planetary system in the true atheistical way,—endeavours to accomplish the same end more philosophically. He talks of the primordial laws of motion and of gravity which '*seem* to be derived from the essence of matter itself', of the *necessity* that all qualities diffused from a centre should diminish in the inverse duplicate ratio of the distance: then he kindly informs us (and this is the only instance in which he ever deviates into a rash and dictatorial form of expression) that the cause of the planetary motions '*can only* be a fluid of immense extent': that this fluid, 'to have given it a motion nearly circular round the sun, *must* have surrounded the luminary like an atmosphere'; that, 'in consequence of excessive heat, the atmosphere of the sun originally extended beyond the orbits of all the planets, and that it has gradually contracted itself to its present limits'; that the planets were 'formed at the successive bounds of this atmosphere, by the condensation of zones, which it *must* have abandoned in the plane of its equator, and, by becoming cold, have condensed themselves towards the surface of this luminary'! Alas! alas! *How is th*

gold become dim! how is the most fine gold changed! It is thus that the most profound philosopher,—the most extraordinary mathematical genius,—the most dexterous investigator, the most successful explorer of nature's secrets now living,—degrades himself to the level of the poor illiterate Indian, when he endeavours to frame a world without the agency of the Supreme Being. Planets, it seems, are formed of solid zones, made of fluid atmosphere, driven from a central sun, by the force of heat! But who or what gave the sun existence, communicated to it heat, invested it with an atmosphere? What is that which sustains *the tortoise*, that holds up *the elephant*, that carries *the earth?* Is the operation of infidelity so perversely efficient, as to persuade a man, who would not admit the simplest proposition in mathematics or physics without demonstration, to reject the grand proposition which stands as the basis of morals and religion; and seduce him into the invention of a hypothesis, the truth of which is not only improbable, but to a mind free from the dominion of prejudice would scarcely appear *possible?* And is *Laplace*, who has poured a flood of light upon one of the most elevated regions of human knowledge, to stand forward, and forever, as an example, that with the talents of an angel a man may become a fool, if he *will* prefer the most fatal error to the most solemn truth? Is the greatest of living philosophers to be cited as a spectacle of human weakness, as an humbling lesson to the pride of intellect, as an illustration of the divine decree, that '*they who despise* GOD *shall be lightly esteemed*,'—either for the baseness and folly of their lives, or for the childishness and imbecility of their reasonings? *I, demens!* we might well exclaim to the man who would separate nature from the God of nature, *et declamatio fias.* But we forbear. To exult on such an occasion is unnatural and unbecoming; and to regret, is vain.

As to the pretended necessity, that qualities emanating from a centre should diminish inversely as the square of the distance, we deny the position. True, the density of illumination decreases in this proportion: but this is not a quality. Whether it be considered as the emission of luminous corpuscles, or as an undulation of an elastic fluid, it is not a quality emanating from a *centre:* and, even if it were, it is quite gratuitous whether the base of the luminous pyramid, or its whole capacity, be considered as the expression of the quantity. And thus might we reason with respect to all action *é distanti*, so far as relates to the *necessity* of any assumed mode of operation. But we must desist. The principal arguments deduced from astronomy, in favour of the existence and providence of God, we have long ago ex-

hibited, in articles, (Vol. III. pp. 663, 897) to which without hesitation we refer the sceptical reader.

Our only remaining quotation from Laplace's work shall be given in its original purity, undefiled by the translator's touch : it is the last paragraph of the treatise.

'L'Astronomie considérée dans son ensemble, est le plus beau monument de l'esprit humain, le titre le plus noble de son intelligence. Séduit par les illusions des sens et de l'amour-propre, il s'est regardé long-temps, comme le centre du mouvement des astres ; et son vain orgueil a été puni par les frayeurs qu'ils lui ont inspirées. Enfin, plusieurs siècles de travaux ont fait tomber le voile qui couvroit le systême du monde. L'homme alors, s'est vu sur une planète presqu' imperceptible dans la vaste étendue du systême solaire, qui lui-même n'est qu'un point insensible dans l'immensité de l'espace. Les resultats sublimes auxquels cette découverte l'a conduit, sont bien propres à le consoler de l'extrême petitesse et du rang qu'elle assigne à la terre. Conservons avec soin, augmentons le dépôt de ces hautes connoissances, les délices des êtres pensans. Elles ont rendu d'importans services, à l'agriculture, à la navigation, et à la géographie ; mais leur plus grand bienfait est d'avoir dissipé les craintes occasionées par les phénomènes célestes, et détruit les erreurs nées de l'ignorance de nos vrais rapports avec la nature, erreurs d'autant plus funestes, que l'ordre social doit reposer uniquement sur ces rapports. VE'RITE', JUSTICE : voilà ses loix immuables. Loin de nous, la dangereuse maxime, qu'il est quelquefois utile de s'en écarter, et de tromper au d'asservir les hommes, pour assurer leur bonheur : de fatales expériences ont prouvé dans tous les temps, que ces loix sacrées ne sont jamais impunément enfreintes.'

This is doubtless very beautiful, and most exquisitely expressed ; yet, to say the truth, much of it is absolutely unmeaning. We have ascertained, perhaps, that the universe is a hundred thousand times more extensive than it was thought by Socrates or Plato ; but how should the results of the discovery 'console' us for the amazing diminution of our importance in the general scale of existence ? In what way can 'social order' depend on a knowledge of our 'relations with nature' ? Is 'social order' better preserved now, than it was before the adoption of the Copernican hypothesis ? Or would it be promoted by placing in every village a reticulated telescope to enable every peasant to count the stars in the Milky-Way ? And, with regard to 'Truth' and 'Justice', how or where could they subsist, as contemplated by Laplace ? Can truth be 'immutable' where there is no standard of truth, or an 'infringement' of justice be dreaded where there is no judge ? Can the 'happiness' of mankind be 'insured' by leaving each individual to himself, and suffering him to become, without any regard to Superior Power or the direction of Infinite Wisdom, his own guide, his own lawgiver, his own judge ?

We have no apology to offer for the length of this article. Next to the 'Mecanique Celeste' of Laplace, the work we have now been describing tends more completely to illustrate the system of the world than any which has been published since the days of Newton, and contains a more correct and adequate representation of the real state of astronomical science. The character of its author exalts him far above our praise; it is only when he degrades himself into an infidel, that he ceases to be one of the first of men. No such language, however, can be applied to the translator. It is impossible for words to express the indignation we feel, at seeing such an admirable work so infamously mangled into English. Careless of the meaning, slavish in imitating the terms, very frequently incorrect, always clumsy, this performance may be regarded as a proof how vile a translation it is possible for a *fellow* of the Royal Society to execute. The punctuation itself, in some of our extracts, and numberless other passages, renders it nearly unintelligible; and, indeed, such are the instances of negligence, mistake, and omission, that we have some scruples whether we should be warranted in recommending this book of Mr. Pond's to any of our readers, except those who have an opportunity of referring, in every case of perplexity, to the original of Laplace.

Art. II. *Essays on Various Subjects*, by George Walker, F. R. S. late Professor of Theology at the New College, and President of the Philosophical and Literary Society, Manchester. To which is prefixed a Life of the Author. 8vo. 2 vols. pp. 739. Price 1l. 1s. Johnson. 1809.

IN the philosophical, and in one division of the religious world, the author of these Essays held a respectable rank for many years. The tolerably well-written Memoir, which constitutes more than a fourth part of this publication, fully shews in what manner his reputation was acquired and deserved. Our avowed and very wide difference in theological opinions, from the school to which he belonged, cannot so affect the medium through which we view his character, as to prevent our seeing that he was in many respects an excellent and an admirable man. His qualities will be best discriminated by a brief notice of the memoir.

It begins by an excessively needless glance at Mr. Walker's ancestry, to the distance of Henry VIII; a length of genealogical line not amounting to any thing very venerable in the view of connoisseurs in such matters, and which, had it been ten times longer, would in Mr. Walker's own estimation, we dare say, have given no additional importance to the fact that he was himself born about the year 1735, at

Newcastle-upon-Tyne, of parents whose circumstances appear to have been little the better for Henry VIII. He enjoyed however the advantage of a liberal education, began to read Cæsar's Commentaries before he was five years old, grew up into an intelligent, studious, and amiable youth, was persuaded by his father and friends, and without reluctance on his part, to the dissenting ministry, studied some time at Edinburgh and Glasgow, and began to preach occasionally in 1754. He continued the exercise somewhat more regularly while residing for a time at Durham, with an uncle, a 'minister of the dissenting congregation in that place, a gentleman of considerable eminence in his profession, but who, from the freedom of his speculative opinions, seems to have been considered by some of his contemporary ministers as entertaining unsound and heterodox tenets.' Here the writer takes occasion to exhibit, once for all, his own and Mr. Walker's religious opinions, by a very fine flash of theological illuminatism.

'That simple and rational conception of Christianity, which admits of nothing as essential to the office of a Christian minister but a belief in its divine origin, and a practical adherence to its precepts, and which regards all *other disputed doctrines* as the speculations of fallible men, as mere human inventions, altogether foreign to its genuine meaning and simplicity, had not yet superseded the use of those particular creeds and confessions of faith, which were deemed to contain whatever was sound and orthodox in Christian belief. From the influence of these contracted notions of religion he was happily freed in having his education entrusted to the care of his uncle, who impressed no bias on his mind in favour of any particular tenets, but left it wholly free to adopt those opinions which should be the result of a rational, manly, and impartial inquiry.' p. vii.

It will be candidly attributed, we hope, to our being quite dazzled by this sudden glare, if we appear egregiously simple in asking whether, (taking the word 'doctrine' in its usual difference of meaning from moral precept, and as signifying the enunciation of truth) this passage means that there are no doctrines at all in the bible; or whether the parts of the book, (say, a third, or a half of it,) which purport to be of that nature, have been introduced by orthodox dexterity since it was first given to the world; or whether, being rightfully and originally there, at the dictation of the same authority as the moral precepts, they are yet so utterly nugatory that it is not worth while for an elder Christian minister and tutor to attempt by argument to lead his pupil to adopt any one explanation of them in preference to any other. Has Mr. Walker been as careless or incapable of preserving intelligible sense in what he said and wrote, as this biographer

there would have been no need of taking the trouble to record his life.

The first serious difficulty encountered by Mr. W. in his public services, was between his dislike to trust himself to pray extemporaneously, and the people's dislike to his reading written prayers If he at all cultivated devout habits in retirement, we may well wonder, as his biographer does, that his promptitude of thought and fluency of expression could have left him in any difficulty in this particular. A letter on the subject, written at that time to one of his friends, professes to resolve the difficulty into a humble estimate of his talents, and a profound reverence for the Supreme Being; but the letter is so little in a serious strain, as to bring the latter part at least of the explanation very much in doubt. The popular will, however, prevailed; and from that time, we are told, 'he rarely, if ever, read his prayers.'

At this time, as at several later periods of his life, his intense application to study destroyed his health; and in this first instance, brought him in danger of a total loss of sight. He was relieved by a compelled suspension of his private and public exertions, and a temporary retreat to the sea coast, from which he writes an amusing account of the reflections and reveries to which he surrendered the mind which had been so rigidly disciplined to scientific speculation.

In 1757, he was invited to succeed his uncle as minister to the congregation at Durham, and received ordination at a meeting of ministers convened for the purpose. Here he pursued his studies with 'inordinate application,' and finished his laborious work on the doctrine of the Sphere. The least successful of his labours, were those relating to the religious improvement of the congregation.

'A lukewarmness and indifference about religious concerns, had generally pervaded his congregation for a number of years, and had previously been a source of great dissatisfaction to his uncle; for nothing certainly can tend so strongly to discourage the well-meant and earnest endeavours of an ingenuous mind, as to find them accompanied with little or no effect. Independently of the personal mortification inflicted, the consciousness that you are scattering your seed on a barren soil, where no friendly culture, no diligence of attention, can nurture it into maturity, sinks the mind at once into languor and despondence. At one time he was so overwhelmed with these considerations, that he had serious thoughts of abandoning his profession, as affording no prospect of advantage either to himself or others.' p. xlvi.

Considering what parts of the New Testament the senior Mr. Walker probably held, and accustomed his nephew and his congregation to hold, in very slight account; and con-

sidering, too, what kind of preaching, as to its doctrinal character, *that* has been, which has actually had the greatest efficacy, ever since the introduction of the Christian religion, we cannot see any thing unaccountable in the religious state of the congregation in question. One thing, however, is really unaccountable;—that an intelligent and (according to this statement) a serious teacher of Christianity, should never have been induced to suspect the radical unsoundness of that system, the adherents of which, not only in his own congregation, but in all times and places, are acknowledged and proved to be 'generally' distinguished by 'a lukewarmness and indifference about religious concerns.'

Though reluctant to quit a place to which he was attached by recollections of former times and interests, he accepted the situation of assistant to the minister of a congregation at Yarmouth. In animadverting on the adjustment which fixed the assistant's salary at a disproportionate rate, the biographer takes occasion to mention an instance of that generosity and disinterestedness, by which Mr. Walker's character appears to have been, through life, pre-eminently distinguished.

'Such petty and ill-judged distinction suited not the liberal mind of Mr. Walker, though while the inferior station was the lot assigned him, it became him not to object. But at a subsequent period, when a similar distinction would have been kept up in his favour, he requested that no such difference might obtain; for, he observed, every man was worthy of his hire; as joint labourers in the vineyard both were entitled to an equal recompence; both were the fellow-servants of the congregation, engaged in the same design, pursuing the same end, and in their offices and duties alike.' p. li.

At Yarmouth, he commenced a work on the Conic Sections, and to this, in conjunction with his multitude of other intellectual pursuits, made an unrighteous sacrifice of his health.

'The same intemperate application to these and his other pursuits still characterized his habits of life; and a variety of consequent complaints compelled him to occasional intermissions of his studies. It is probable that from the commencement of his taste for the mathematics, may be dated that want of economy in the distribution of his time, which led him to appropriate to the prosecution of his studies, so many of those hours, that, with his infirm state of health, would have been more wisely given to sleep, and the restoration of exhausted nature. For months together, has he retired to rest with the rising of the sun, and, till within a few years of his death, when his strength was not equal to such arduous exertions, it was his usual custom to prolong his studies to an advanced hour of the morning. He seems at all times to have considered his body as the mere slave of his mind, and to pay no other attention to it than what its necessities absolutely required. Experience

however sufficiently demonstrates the injudiciousness of such a system, and its tendency to defeat the very object it has in view.' p. lviii.

The 'want of economy in the distribution of his time' should have been more pointedly stated by this biographer, if he wished to give an accurate notion of Mr. Walker's character, and a salutary lesson to the public. Dr. Aikin (Athenæum, No. VI.) less cautiously laments the 'habitual want of punctuality and forgetfulness of engagements' for which Mr. W. was distinguished; and we scarcely need observe, that these habits, combining with his good humour to produce a total inattention to discipline, must have been almost fatal to his usefulness in the important functions of a tutor.

The biographer softens, and partly revokes, the censure on Mr. W.'s disregard of health, by alledging the nature, attractions, and merits of mathematical science, of which he goes into a long and magnificent eulogium, avowing a comparative contempt of historical, classical, and even metaphysical studies. It may be from mere inadvertency of expression, that the writer pronounces the superior excellence of mathematical speculations as contrasted with 'the *objects* of metaphysical inquiry;' as this would be, verbally, not much unlike an assertion that matter is superior to mind. It cannot be from inadvertency, however, that the digression ends, in despite of what every one knows of the mathematicians of the continent, and many mathematicians of this island, with the following curious assertion—'Bigotry and *scepticism* can scarcely find admittance to the heart of a mathematician.'

Mr. Walker was solicited by Lord Lansdown to undertake the education of his sons, which he declined in consequence of having become a married man, and judging it would interfere with his domestic comfort. The office was undertaken by Dr. Priestley. In 1771, just after Mr. W. had acceded to an invitation from a congregation at Birmingham, he was invited to the mathematical professorship in the Warrington academy, which he accepted in preference, but afterwards regretted the choice. And this regret was more from a sense of obligation in the previous engagement, than from the total failure of the bare means of support, which compelled him to relinquish the academical situation. During the period he held it, he finished and published his 'Treatise upon the Sphere,' of which we will transcribe the short history.

'This is generally acknowledged to be the most masterly treatise on the subject extant, and is remarkable for the purity of the language, and the elegance of the demonstrations. But if there were no other merit to recommend it to the student, the construction of the solid figures

wherever they are required, must render it of superior utility. The time and labour employed in the contrivance and final preparation of these figures greatly exceeded that of the composition of the whole work besides. To furnish 500 copies to the public required the cutting out of more than 20,000 figures, which were afterwards to be divided, pierced, fitted, and the whole inserted in the plane to which they are adherent; an immense undertaking, and a species of mechanical employment peculiarly irksome to a man of taste and genius. This production, the result of so much patient industry and laborious investigation, was sold to Mr. Johnson for the small sum of 40l. and even this was afterwards voluntarily remitted by Mr. Walker, as the sale had not indemnified him for the expense of publication. That a work of such acknowledged merit should have met with so little countenance from the public, strongly argues the decline of mathematical learning.' p. lxxxi.

On this passage we must be allowed to make a few remarks. First, the method adopted by Mr. Walker in what his biographer calls 'the construction of the solid figures,' did not originate with that author, as an uninformed reader might be led to suppose. Figures constructed in a similar manner, so as to turn up and form the solid projecting above the page, have been known in this country more than 200 years. Several of them are given to illustrate the geometry of solids, in the oldest English edition of Euclid's Elements, that published by Sir Henry Billingsley, in 1570. Such figures may also be found in several works republished in the last century; but we need mention only two very common and well known books,—Cowley's Solid Geometry, and B. Martin's Παγγεωμετρια. Secondly, we can see 'no merit to recommend it to the student' in devoting so much 'time and labour' to the 'contrivance and final preparation of these figures;' though it must evidently be 'a species of mechanical employment peculiarly irksome to a man of taste and genius;' and we are quite at a loss to conceive how any such man could waste his time in clipping and pasting down 20,000 figures, which, after a specimen copy was prepared, would have been done just as well by any book-binder's apprentice. 'Patient industry' is doubtless very commendable, but only when it is necessary to the accomplishment of important purposes; in other cases, it is not so much the merit of a noble order of men, as the characteristic of a humble race of quadrupeds. Thirdly, the 'little countenance' given by the public to Mr. Walker's treatise on the Sphere and that on the Conic Sections, so far from 'strongly arguing the decline of mathematical learning,' would rather furnish an argument of the contrary kind. These performances of Mr. Walker are correct, and display taste of a certain kind: but they are formed upon the model of the most diffuse of the ancient geometers; and are, therefore, excessively tedious

The departments of plane and spherical geometry, and conic sections, once occupied nearly the whole region of mathematical knowledge. But in the course of 2000 years, their proportionate importance has been exceedingly reduced. They now stand as a small, but carefully cultivated fruit-garden, through which we are admitted to demesnes of infinitely greater extent. If a course of mathematics were now to be drawn up after the manner of this philosopher, who would have one quarto volume appropriated to spheric geometry and five more to the conic sections, we cannot tell how many libraries would be filled with the books that must be devoted to the whole of modern analysis, in its numerous varieties and immense applications; nor how many Methuselaic lives would be necessary to read and understand them.

Mr. W.'s next situation was that of minister to a congregation at Nottingham, in which he continued till within a few years of the close of his life, when he was induced by the hope of superior usefulness to quit a society to which he was become deeply attached by the intercourse of more than twenty years, in order to occupy the professorship of theology in the new college at Manchester. 'For the last two or three years of his continuing in this situation, he had also the additional charge both of the mathematical and classical department; so that the whole burden of the institution rested on himself.' This extra labour appears to have devolved upon him in consequence of the failure of the pecuniary resources of the institution, and to have been performed gratuitously. It is very interesting to contemplate the description, given by this ardent and indefatigable man, of the labours under which he felt his old age oppressed and sinking.

'It is in respect to your letter, which required more than a common reply, that I have delayed my answer. I am every day so harrassed and exhausted, by having this year imposed on me the whole duty of three tutors, that I seldom retire in the evening with strength or spirit to encounter the least exertion. My present labours are fitter for a Hercules in his youth, than for an old man. Though I have never lived an idle life, all my former employment was but as amusement in comparison with my present. I have twice a day the full exercise of my head and voice for two hours at least, as theological tutor. The remainder of the day summons me to the duties of the classical and mathematical, which, though easier, as supposing a knowledge more ready to come forward when required, yet cannot be discharged without thought and reflection, and as an exercise of voice greatly fatigue and exhaust me. And what may be called my intervals of relaxation are considerably occupied in preparing my mind for the work of the succeeding day. To all this is to be added attention to exercises, compositions, and to domestic regularity and morals. Nor is this all: I preach more than when I had the charge of a congregation; but though this is gratuitous, I

cannot, to indulge myself, refuse it, as there are some small congregations around this town, who well deserve attention, but cannot maintain a minister.' p. ccv.

At the same time he was a member of the Manchester Literary and Philosophical Society, was a frequent contributor to its memoirs, and on the death of Dr. Percival was appointed to succeed him as President. He resigned his professorship three years before his death, spent the last year of his life at a village near Liverpool, and died in April 1807. Amidst his languor, and evidently rapid approach toward the period of life, in this last year, he retained his intellectual vigour and his wonted cheerfulness in social intercourse.

'The only observable difference was occasional fits of abstraction, during which it is more than probable that his mind was occupied by such serious reflections, as the intimations of declining life are calculated to impress; for it was apparent that there was a more guarded collection of himself, a more evident attempt to repress that warmth of temper, that quickness of spirit, which through life had been his constitutional temperament, and which he himself acknowledged that he possessed in a greater degree, than what with all his sense of duty to God and man, he had been well able to manage; and whence, from that inquietude of mind, and pain of self condemnation, which the surprise of this passion had occasioned, had flowed many of the bitterest vexations which he had experienced through life.'

'The last act of his life, while a state of perfect consciousness remained, was an attempt to express himself in prayer; but the power of articulation was gone: nevertheless he was observed for some time after, with his hands folded upon his breast, to be absorbed in fervent devotion, thus dying, as he had lived, with a mind directed towards God and another world.' pp. ccviii, ccxii.

We hardly know any terms too strong, not even those quoted from Mr. Gilbert Wakefield, at the close of this memoir, to describe justly Mr. Walker's exertions and acquirements, his independence of principle, his zeal for the public good, and his admirable disinterestedness. No man's exertions in the research after truth, and to promote the interests of mankind, could be less influenced by considerations of personal advantage, in the way of emolument, or connexions, or fame; in any of which points he was capable of making every sacrifice to his conscience, and his love of truth. No man, in undertaking a good design, was less capable of pausing to inquire whether he should be rewarded, or less deterred from undertaking a second, by having been ill requited for the first. He was, in short, a very genuine philanthropist, patriot, and philosopher; a man, whose integrity might have been committed to any trial, whose benevo-

lence continued undiminished after all that he witnessed or experienced of human perverseness, and whose intellectual attainments were eminently diversified and comprehensive. In proportion to our respect for such a man, must necessarily be our regret, that the zeal which he manifested for what he embraced as the truth, in religion and all other subjects, should not have been devoted to what is in our apprehension the apostolic form of Christianity.

During his residence at Nottingham, he became very conspicuous as an able, though not always, perhaps, a very circumspect or temperate advocate of the principles of liberty, both as relating to the general theory of politics, and to several great practical questions agitated in the nation within that time. In common with a venerable list of the most enlightened and devout of our ancestors, he was of opinion that just views, and a most vigilant care, of civil and religious freedom, are indispensable to the welfare of a people; and that, unless a man's being a Christian and a minister can exonerate him from a concern for the public good, he may laudably endeavour to promote those views, and awaken that care. Accordingly, at some of the stages of the contest with America, on the occasion of Burke's bill for economical reform, at the period of the discussions on parliamentary reform, and at several other important junctures, he zealously promoted petitions to the legislature, drew up some of them himself, and addressed some of the popular meetings where they were proposed. One of the speeches, and abstracts of several others, delivered by him on these occasions, are inserted in the present memoir, and bear a strong character of earnest argumentative eloquence. One of them sketches the history and theory of the English constitution; and shews in a very lucid manner, that the corruptions remonstrated against do not merely vitiate that constitution, but absolutely nullify it. The same force of argument and illustration is directed to the same gloomy proof, in a long and serious private letter to a member of parliament, on occasion of the convention, treason, and sedition bills. In the attempt to obtain the repeal of the corporation and test acts, he had, as a dissenter, a specific interest, and did not fail to make an animated exertion. As to the slave trade, such a man would have abhorred it, even had he lived at a period when not another man would have seconded his hostility. With the exception of the consolation derived from this last subject, we cannot read of all the labour, and argument, and eloquence, that have been in former periods directed against the flagrant corruption of public institutions and proceedings, without melancholy feelings from

the reflection on their inefficacy, while we see that that corruption has been ever since making a constant progress, and can now at last avow itself with impunity and without shame in the very place where the people have deposited their interests to be protected against it.

The rejection of the claims of the dissenters induced Mr. W. to publish a statement of the question, and this tract forms the longest of the essays subjoined to the present memoir. Like all the others, it was evidently written in too much haste, and not duly elaborated into strict argumentative connexion in every part; but it comprises probably all the principal arguments on both sides, and discusses them in such a manner, that it will not be wondered Mr. Fox should have pronounced this the best performance that appeared in the controversy.

Not many observations are requisite in order to an estimate of the other essays, which are on the following subjects:—the beautiful in the human form, and the excellence of the Grecian statues—the interest in tragical representations—defence of learning and the arts against Rousseau—hypocrisy and open profligacy, and the comparative demerit of each—probable arguments in favour of the immateriality of the soul—the machinery of the ancient epic poem—the moral influence of history—natural and moral philosophy, and the proper manner of philosophizing in both—imitation and fashion.—Several of these are of great length, and most of them purport to have been discourses read to a literary society, we suppose that of Manchester. They are written with little regard to ornament, or even accurate finish, of composition; but they evince much acuteness, a free range over the whole field of knowledge, honesty, and the utmost independence of thought. It will be admitted as some indication of this last quality, that a man of Mr. W.'s theological class should be a believer and zealous advocate of the immateriality of the soul, for which he has ably stated several of the leading philosophical arguments. He has forcibly illustrated the invalidity of the claims of history to be admitted as one of the best moral instructors, except to a small number of very reflective minds. As to the generality of readers, he has shewn, and indeed it was easy to shew, that its influence is in many respects pernicious. At the same time, we do not agree with him, to the full extent, in the argument that history tends to give too bad an estimate of human nature. We perceive, in every part of the essays, that human nature is a great favourite with him, in spite of that intensely active principle of evil which has faithfully and permanently, as by a fixed law of nature, been emitting vice

and mischiefs from the human mind in all modifications of society, in all countries, and all times. The essay on the machinery, that is, the mythology, of the ancient epic poem, is very amusing. He storms Olympus with a vengeance, (as he would be apt to express it) and drives and sweeps the celestial crew down into the sea. He shews that this machinery was as degrading to poetry, as mischievous to morality. The essay ends, however, with the most unaccountable thing in the volume; a sort of recommendation to try the effect of the eastern mythology, in substitution for the Grecian and Roman. The comparative estimate of hypocrisy and open profligacy had much better have been omitted; it has too much the air of extenuating the latter, a very unnecessary mode, surely, of evincing the author's characteristic and acknowledged abhorrence of guile and meanness. He exerts much ingenuity to prove that the *mean* of all individual human forms, if it could be obtained, would be the perfect standard of human beauty. The reader will be startled on beginning to read the essay on imitation and fashion, in the first page of which Moses is represented as an impostor; on reading forwards, he will perceive the whole essay is a piece of sham reasoning in ridicule of such philosophers as Monboddo. We utterly disapprove, however, of saying things of this kind even in ridicule, to any considerable extent.

We know not whose fault it is, that the price of this book is so exorbitant.

Art. III. *A System of Chemistry.* By J. Murray, Lecturer on Chemistry, and on Materia Medica and Pharmacy, Edinburgh. 4 vols. 8vo. pp. about 3000. Price. 1l. 16s. bds. Creech, Constable and Co. Edinburgh; Longman and Co. 1806, 1807.

WHILE the two first volumes of this work were reposing on our shelves, in quiet expectation of their promised companions, the genius of chemistry was pursuing a course of sublime analysis, the effect of which was destined to be a vast discomposure in every existing arrangement: and, when we received the third and fourth volumes, the results of Mr. Davy's experiments had diminished our motives for expediting a notice of Mr. Murray's work, and disposed us to yield our attention to the urgency of more imperious demands.

Thus animating has been the progress of chemical science. Scarcely thirty years have elapsed, since the first fair openings were made into the field of pneumatic discovery, and rational theory. New facts have, in succession, been evolved, whose relations and various bearings have had a material influence on the attempts at systematic arrangement. The lo-

gical scheme of Lavoisier, the perspicuous treatise of Chaptal, and the voluminous repositories of the detestable Fourcroy,* have been published, approved, and superannuated, with a rapidity unexampled in the annals of science. These, and other works of sterling excellence, have of necessity fallen into the rank of *Memoires pour servir à l'histoire de la Chemie.*

That a work, composed with so much care and diligence as this of Mr. Murray, should in any degree have this fate almost immediately on its publication, must be hard for an author to bear. We have little doubt, however, that our author's zeal for the interests of science has proved victorious over his personal feelings; and that, with much philosophy and good temper, he rejoices in those new and splendid discoveries, which have in some points affected the permanent value of his book.

It is our intention to give an account of the distribution and general merits of Mr. M.'s System; and afterwards to venture on some hints to assist those who study chemistry, not professionally, but as a part of liberal knowledge, in constructing a plan of re-arrangement and reference, by which they may usefully combine the new discoveries, with Mr. Murray's, Dr. Thomson's, or any similar work of systematical chemistry.

The general plan of the work will appear from the titles prefixed to the nine books: An Introduction:—Attraction:—Imponderable Substances:—Simple Gases, with their Binary Combinations:—Simple Inflammables, and their Binary Combinations:—Undecomposed Acids:—Metals:—Earths:—Vegetable Substances:—and Animal Substances.

The Introduction consists only of a brief and general statement of the nature, objects, and applications of chemistry; a sketch of its history, and the author's reasons for the plan of arrangement which he has adopted.

The first book is on *Attraction.* After a single paragraph on the universal law of gravitation, the author considers the attraction of aggregation, and the laws of its action. This leads him to the doctrine of crystallization, of which he gives a neat and clear statement, sufficiently noticing the arbitrary hypothesis of Romé de l'Isle, and perspicuously explaining the leading principles of the Abbé Hauy's mechanical system. He then proceeds to the great article of chemical affinity, the cases, laws, and modifications of which are treated at length.

* Would to heaven there were no strong grounds for the suspicion of his concern in the murder of Lavoisier!

The omission of tables we consider as a serious deficiency in this part of the work, for which a very unsatisfactory reason is assigned. We admit that absolute precision has been obtained in comparatively but a few examples. Yet, if students are to be totally regardless of all cases of chemical action, except 'so far as they have been ascertained with accuracy,' a more extended application of the same principle would proscribe attention to all analogies and approximations, and condemn to the knife many hundred pages of his four elaborate volumes. An ample set of good tables furnishes the usual advantages of synoptic representation to the eye and the memory: and such tables, if properly understood, will rarely mislead, but will frequently furnish important facilities in devising new experiments. The tables which Mr. M. has inserted under the history of each substance, through the work, are too meagre and restricted to answer all the needful purposes.

The second book is intitled, '*Of Imponderable Substances*,' a term certainly open to objection, but under which are included caloric, light, and the electric fluid.

The chapter on *Caloric*, is very long and elaborate; presenting not only the ordinary chemical doctrines, but a full exposition of the experiments, reasonings, and theories of M. Pictet, Mr. Dalton, Dr. Hope, Dr. Herschel, Sir Henry Englefield, Professor Leslie, &c.; and detailing some original experiments and numerous observations of the author himself. The chemical agency of *light* is largely considered. Among other interesting and well-digested matter, we observe with pleasure that Mr. M. has introduced a pretty full account of Mrs. Fulhame's ingenious and beautiful experiments on the action of light in reducing metallic oxyds. With the history and phenomena of *electricity*, he connects those of *galvanism*, and a comprehensive statement of the applications of the Voltaic apparatus, so far as they were known previously to the discoveries of Mr. Davy.

The second volume contains the third, fourth, and fifth books: of which Book III treats of the *Simple Gases*, and their Binary Combinations. We here find the history of the oxygen, nitrogen, and hydrogen gases; and of the compounds, atmospheric air, the three alkalies (according to the incomplete analysis of ammonia, and the erroneous, though at that time probable, conjecture with respect to the two others;) water, and the oxyds of nitrogen. All these and their dependent subjects are treated with eminent perspicuity, and with abundant indications of a clear, penetrating, and cautious judgement. We are especially pleased with Mr. M.'s discus-

sion of Mr. Dalton's theory of the mixed gases. He urges forcible objections against that theory, and proposes a doctrine which appears to us less hypothetical, more consonant with known facts both mechanical and chemical, and completely adequate to the solution of the question.

'Perhaps that chemical attraction which subsists between the solid bases of these gases (*viz.* oxygen and nitrogen in the constitution of atmospheric air) but which, when they are merely mixed together, cannot from the distance at which their particles are placed, by the repulsive power of caloric, bring then into intimate union, may still be so far exerted, as to prevent their separation; or they may be retained in mixture by that force of adhesion which, exerted at the surfaces of many bodies, retains them in contact with considerable force. This principle, that chemical affinity may be exerted between the particles of mixed gases, so as to prevent their separation, but not with such a force as to bring them into intimate combination, is in itself sufficiently probable, and at the same time affords an explanation of the phenomena connected with the constitution of the atmosphere. The particles of oxygen and nitrogen gases, its chief constituents, have a mutual affinity, for they can be intimately combined together. At the temperature at which they exist in the atmosphere, this is not sufficient to overcome their elasticity, and unite them so as to detach their caloric, and form a new substance. But it may not be entirely dormant, but may be so far exerted, as to keep them in a state of adhesion, or prevent their separation, or even produce a degree of approximation, so inconsiderable, however, as not to be discovered by any considerable change of volume, (and that a slight increase of density does follow the mixture of oxygen and nitrogen gases, has appeared to be the fact to several chemists, though, if it be inconsiderable, it is obvious that it must be very difficult to discover it with accuracy). This hypothesis derives additional probability from the views of chemical affinity, which have been presented by Berthollet, and his theory of the chemical nature of the atmosphere is precisely that which I have now stated. I consider it as preferable to Mr. Dalton's.'

The means which the Author of nature has provided, for preserving the constant adjustment of the component parts of the atmosphere, under its perpetual liableness to alteration from putrefaction, combustion, and other processes on the earth's surface, are involved in considerable obscurity. Yet we are gratified to find Mr. M. speak favourably though cautiously of a doctrine, which, while it is certainly attended with difficulties, merits higher consideration, than to be renounced with the sceptical contempt which we have observed to be fashionable, within the last ten years, among certain minor philosophers.

'An interesting subject in the history of the chemical constitution of the atmosphere, is the consideration of the means by which the uniformity, in its composition, which is adapted to so many import-

purposes, is preserved. By the operations constantly carrying on at the surface of the earth, respiration, combustion, and the decomposition of animal and vegetable matter, it is suffering constant changes; its oxygen is consumed, and carbonic acid and various other gases are disengaged and communicated to it. How are these changes regulated, so as to preserve the atmosphere in its proper purity?

'Dr. Priestley, in consequence of his experiments on the means of restoring the purity of atmospheric air, pointed out vegetation as the important natural process by which this is chiefly effected. From these experiments, supported also by those of Ingenhouz, it appeared, that growing vegetables, exposed to the solar light, emit oxygen from their leaves; and it was afterwards proved, that they absorb carbonic acid by the under surface of the leaf as well as by their roots, which appears to be decomposed in their vessels, and to serve for the formation of their products. Hence was suggested an admirable view of the mutual adaptation of the animal and vegetable kingdoms; the individuals belonging to the one, consuming oxygen and expiring carbonic acid; those of the other absorbing carbonic acid, and restoring oxygen to the atmosphere. Such a view is conformable to the general economy of nature, though there is some reason to doubt if the supposed facts on which it rests, are sufficiently established. The subject is involved in some obscurity, and it is not improbable that there are other natural processes by which the balance is adjusted, and the constitution of the atmosphere so uniformly preserved.' pp. 60—61.

This nice and intricate subject is discussed with great care in the Fourth Volume, pp. 26—55.

Book IV treats of the Simple Inflammables, *Carbon*, *Sulphur*, and *Phosphorus*, and of their Binary Combinations, with each other, forming Carburets, &c.—with Hydrogen;—with the Alkalies;—and with Oxygen, forming their respective Acids, under each of which is given the history of their Salts with Alkaline base. With the exception of the Neutral Salts, the account of which is disproportionately concise, these substances are minutely and accurately examined.

The next Book relates to the Undecomposed Acids, the *Muriatic*, the *Fluoric*, and the *Boracic*; and their Combinations. The chemical history of these substances is related with that correct diligence which characterizes the work. Ample justice is given to the endeavours of Henry, Pacchioni, Peel, and Sylvester, to discover the Muriatic Radical.

The third volume, comprizing the sixth and seventh Books, is devoted to the history and analysis of *Mineral Substances*. In this department of his work, Mr. Murray appears with singular advantage. He does not confine himself to the bare history of the Metals and Earths as they exist in a state of reduction to purity by chemical processes, but

gives a concise Mineralogical Description of the principal specimens of Native Fossils under each Genus. We should have been glad if he had, more uniformly, mentioned the native seat of each fossil.

Two Essays, as an Appendix, are subjoined to this Volume. The first is on *Mineral Waters*, in which the varieties of those compounds are enumerated and classified, and ample instructions are given for analysing them. The second is on *The Formation of Mineral Substances, and their Arrangement, as composing the Structure of the Globe.* For this portion of geological investigation, a satisfactory reason is assigned.

'In concluding the history of the compounds which belong to the mineral kingdom, it is perhaps necessary to give some account of their natural arrangements, and of the theories which have been proposed to account for these, and for their original formation. It would be altogether foreign to the object of this work to enter on the minute details of this subject, particularly those connected with the natural positions and relations of mineral substances; this belongs to a different science. But so far as the investigation is dependent on chemistry, or can receive any elucidation from the application of its principles, it may with propriety form an appendix to the chemical history of the mineral kingdom.' Vol. III. p. 23.

Mr. Murray is a zealous Neptunist of the Wernerian school: and he shews much sagacity and vigour of mind, in detecting and displaying the weak parts of the Huttonian theory. At the same time, he is intitled to the praise which few of its opponents have merited, of a candid spirit and respectful language toward Hutton himself, Mr. Playfair, and the other advocates of that hypothesis. As we hope for a work from the pen of an eminent Professor, which will afford the fairest opportunity of examining the details of the two rival systems, we shall enter no farther into the subject at present, than to point out a fact, equally curious and admonitory to the constructors of theories. Mr. M. triumphs in his principal argument, as '*utterly subversive* of that system of indefinitely renewed operations, which is represented as the grand excellence of the Huttonian theory'; and as 'a *demonstration* of the fallacy of the first principle of the Huttonian system, for it is founded on a physical fact, uncontrovertible, and is deduced from that fact by a single inference equally undeniable'. Yet this puissant and sovereign argument has been most unexpectedly and completely prostrated, by Mr. Davy's discoveries. Those discoveries have formed a new æra in science: and, among other important developements, they have established the fact, that

a source of heat really exists, *adequate* to the immense demands of the Huttonian system, operating according to a *determinate law* of nature, yet necessarily liable to a succession of *energies* and *remissions*; and that this source of heat, it is more than probable, has its residence in a vast accumulation within the globe of the earth.—But we shall quote the just and temperate observations of Mr. Davy himself. "The metals of the earths cannot exist at the surface of the globe, but it is very possible that they may form a part of the interior; and such an assumption would offer a theory for the phænomena of volcanoes, the formation of lavas, and the excitement and effects of subterraneous heat, and would probably lead to a general hypothesis in Geology." — "Let it be assumed that the metals of the earths and alkalies, in alloy with common metals, exist in large quantities beneath the surface, then their accidental exposure to the action of air and water must produce the effect of subterranean fire, and a product of earthy and stony matter analogous to lavas." Phil. Trans. Part II. 1808.

The fourth volume presents us with the chemical history of *Vegetable*, and of *Animal*, *Substances*, agreeably and very usefully conjoined with no inconsiderable portion of physiological information. This volume is marked with the same correct taste and cautious judgement, that we have commended in the preceding. We shall give a sketch of its contents. Book VIII treats of Vegetable Substances, under Three Chapters. I. Of their physical *Formation*. II. Of their *Proximate Principles*, obtained by the separation of the immediate constituents of the compound; and the analysis of each of those proximate principles. III. Of the *Spontaneous Chemical Changes and Decomposition of Vegetable Substances*. Book IX is devoted to Animal Subtances, on a plan entirely similar to the distribution of the preceding book. I. Their *Formation*, considered physiologically. II. Their *Products*, by a separation of immediate principles. III. Their *Decomposition*, from the re-action of their elements. The following citation, from the Introduction to the volume, will give a just idea of the author's comprehensive and exact views.

"There are some subordinate distinctions between the vegetable and animal substances. As the constituent principles of animal matter are more numerous, their affinities are more nicely adjusted, and more liable to be altered by the slightest alteration of circumstances. Hence animal products are, in general, more susceptible of decomposition. This, too, is of a nature somewhat different, with regard to the process, from that of vegetable matter; and, in particular, they are dis-

tinguished, by being liable to that species of spontaneous decomposition which constitutes putrefaction: the others decay, but their decomposition is not marked by the evolution of those products which distinguish that of animal matter, and which characterize this process. Their analysis by heat also is different. Vegetables are resolved principally into carburetted hydrogen, carbonic oxide, and carbonic acid; animal substances always afford a large quantity of ammonia, and generally also combinations of hydrogen with sulphur, phosphorus, and nitrogen. It is on the presence, principally of these three latter substances, that these differences depend; in vegetables, they are generally altogether wanting, or, if present, are always in inconsiderable proportion.

'Though the compounds which belong to the vegetable and animal kingdoms can seldom be formed by artificial arrangements, it is not to be concluded, as has been done, that this arises from peculiar unknown forces, under the exertion of which their natural formation has been accomplished. They are chemical compounds, the result of chemical affinities, which have been exerted merely under peculiar circumstances. We can even by artificial processes form compounds perfectly similar to some products of vegetation; and, although the actions by which the greater number of these products are formed can be only imperfectly imitated in our processes, we can still so far trace them, as to discover their theory, and the nature of the modifications to which they are subjected. Hence the natural formation of these substances is strictly a subject of chemical investigation; and vegetable and animal physiology, so far as it is connected with this, is a department of chemical science,—one which is at present the most defective and obscure, but in which the progress is perhaps the least limited, which may reach the highest perfection, and present the most important results.' pp. 4—5.

The interesting subject, of solvents for *Calculi* in the bladder, receives a careful investigation; an important part we insert, in addition to the conclusions of Mr. Brande, (vid. supra pp. 515, 516,) with whom Mr. M. agrees in the recommendation of alkalies and the theory of their operation. Mr. Murray, however, was not aware of the tendency of alkalies to favour the deposition of phosphates, which Mr. B.'s observations lead him to suspect.

'Long experience has sufficiently established the advantage derived in calculous affections from the use of alkaline remedies; and as the calculi composed of uric acid are those which are by far the most abundant, it is no doubt, from the chemical action they exert upon it, that the benefit is derived. Where the pure alkali is used, a real solvent power may be exerted; and it has been proved, that the alkali is secreted by the kidneys, so as to render the urine sensibly alkaline, and even capable of acting on the calculus out of the body. Yet the solvent power is very inconsiderable, and the remedy, at the same time, proves so irritating, when taken to any considerable extent, that the solution of a calculus even of small size can perhaps be scarcely expected. The

and irritation which attend the disease, however, are considerably alleviated by their habitual use, and this even when the alkali is saturated or super-saturated with carbonic acid,—a circumstance with regard to which there appears some difficulty in giving an explanation, since the alkalis in this state have been supposed not to act on uric acid. From the experiments of Dr. Egan, already stated, this, however, appears to be a mistake; though the relief obtained from the use of these may also be in part derived from the saturation of the phosphoric acid which is likewise secreted; the urine is thus rendered less irritating, and the tendency to a deposition of uric acid diminished, all acids hastening the precipitation of this acid from urine. Lime, under the form of lime-water, has also been employed as a solvent; but its use has seldom been general, either from the prejudice that itself entered into the composition of these concretions, and would therefore rather favour their formation; or from the supposition, that, on account of its sparing solubility, so little of it could be introduced into the system, that it would have no great power. The experiments of Dr. Egan, however, have shown, that lime-water acts with more energy than an alkaline solution of similar strength, in destroying the aggregation of an urinary concretion; and I observed this effect strikingly displayed in a comparative trial which these experiments led me to make. In a dilute solution of pure potassa, a calculus of the uric acid kind was in part dissolved, the liquor, after a short time, giving a copious white precipitate with muriatic acid; but the remaining calculus preserved its aggregation, apparently without much alteration, the external layer having been merely removed; while a calculus of a similar kind, and discharged from the same person, immersed in lime-water, became in a few days white and spongy; it appeared at length to be entirely penetrated; its cohesion was subverted; it presented a kind of loose scaly appearance, and the least touch made it fall down. The lime probably operates more upon the albumen or animal matter, which appears to serve as the cement or connecting substance, than upon the uric acid; and in endeavouring to discover solvents for these concretions, our views ought perhaps rather to be directed to this operation than to the effect on the saline matter. If lime, when received into the stomach under the form of lime-water, can be secreted by the kidneys, as the alkalis unquestionably are, it would appear, from these observations, to be superior to them as a solvent. And Dr. Egan likewise found it to be effectual in preventing the deposition of uric acid from urine.

'Those calculi which are composed of oxalate of lime, phosphate of lime, or phosphate of magnesia and ammonia, not being soluble in alkalis, it has been supposed that the use of alkaline remedies can be attended with advantage only where the calculus consists principally of uric acid, and that the solution of the others, were it attempted, must be by the action of weak acids. If the view now given, however, be just, the use of the alkalis, or of lime-water, may be useful, even in these cases, by acting on the animal matter; and it appears very doubtful, if acids can ever be given to that extent to render the urine sufficiently powerful from their operation to exert any solvent power.

Fourcroy and Vauquelin have proposed, that the solution of urinary concretions should be attempted by the injection of the proper solvents into

the bladder; the uric acid calculus being dissolved, they observe, by some days immersion in an alkaline ley, so weak that it might, as they suppose, be safely injected, and the calculi of the phosphates being dissolved by water, in which there was so little muriatic acid as to give only a slight sourness. From the extreme irritability of the bladder, however, with regard to every fluid but that which it usually contains, and to which the state of that irritability is adapted, there can be little doubt but that this project is altogether impracticable.' pp. 668—671.

Our general opinion of Mr. Murray's work will be collected from the remarks which we have made on particular parts. He displays extensive and accurate knowledge, mature reflection, clear reasoning, and solid judgement. As a writer, his composition is lucid, chaste, and correct We cannot, however, but wish, that he had thrown the body of his work into a form nearly resembling that of propositions and scholia. Such a mode of disposing scientific facts and reasonings, is, in our opinion, the most favourable to the readiness and certainty of apprehension, and to the ease of retention: and while it serves the advantage of the student, it would no less promote the interests of science. By confining philosophical writers within the more rigorous rules of logical method, it would operate to check the propensity to loose theorizing: to separate, by broad lines, demonstration, strong probability, and vague conjecture; to destroy plausible errors in the germ, and to place truths on an eminence far above the perplexity of cavil. Mr. Murray has chosen the plan of disquisition; the uniform continuity of which spreads a colouring of tiresome sameness over his work. If, indeed, he had, from choice, rejected the technical method which we have recommended, he might have embraced its leading advantages by printing marginal summaries, or by prefixing a syllabus to each section. We have also regretted the want of more ample details, in giving the practical uses of every substance in medicine, and in the economical and commercial arts. The scantiness of information, on this highly important branch of knowledge, disappoints the reader, and is disproportionate to the exact and plenary exactness of the other parts of the work.

We are now to subjoin a scheme of arrangement; with the view of assisting general readers, or young students of chemistry, to combine the interesting results of Mr. Davy's celebrated researches, with Mr. Murray's or any similar work of Systematic Chemistry.

After an Introduction on the doctrines of Chemical Affinity, our arrangement should consist of seven principal divisions.

I. Substances which have not been decomposed, and which, in the present state of chemical analysis, we must consider as *simple*. These are, i. Light. ii. Caloric. iii. The Electric Fluid. iv. Oxygen. v. Hydrogen. vi. Nitrogen. vii. Carbon. viii. The Metals, including Potassium, Sodium, Ammonium, the metallic bases of the Earths, and that of the Boracic Acid. ix. The bases of Sulphur, Phosphorus, the Muriatic, and the Fluoric Acids. This order must be regarded only as temporary, and probably belonging to the viiith.

II. Binary chemical compounds, or compounds of the first gradation.

i. Compounds of Caloric and certain other substances, forming fluids permanently elastic under the ordinary pressure and temperature of the atmosphere; (1.) Oxygenous Gas. (2.) Hydrogenous Gas. (3.) Nitrogenous Gas.

ii. Binary compounds of Oxygen and certain other substances.

Metallic oxyds, including the Alkalies and Earths.

III. Ternary chemical compounds, or compounds of the second gradation.

Caloric and Oxygen with a third substance.

i. Combinations of Nitrogen; (1.) Atmospheric air. (2.) The Nitrous and Nitric Oxyds and Acids.

ii. Combination of Hydrogen. Water.

iii. Combinations of Carbon; (1.) Carbonic Acid Gas. (2.) Carbonic Oxyds. (3.) Carburets.

iv. Combinations of Sulphur; (1.) Sulphurous and Sulphuric Acids. (2.) Sulphurets.

v. Combinations of Phosphorus; (1.) Phosphoric Acid. (2.) Phosphurets.

vi. The Muriatic, Oxymuriatic, Fluoric, and Boracic, Acids.

IV. Compounds of the third gradation, or those which are more than ternary.

The Neutral Salts, in their usual order.

V. The chemistry of the Mineral Kingdom.

VI. The chemistry of Vegetable Substances.

VII. The chemistry of Animal Substances.

Art. IV. *Voyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt*, in the Years 1802—1806. By George Viscount Valentia.

(Concluded from p. 830.)

BY means of a Banian at Massowah, lord Valentia had procured a message to be conveyed to the governor of Tigré, the most powerful man, just at that time, in Abyssinia, requesting permission for some authorised Englishman to visit

him in order to make overtures for an amicable commercial intercourse between the English and Abyssinian nations. While at Mocha for the last time, he received a favourable answer to this message, and instantly determined to send Mr. Salt, accompanied by a Capt. Rudland and a Mr. Carter, who requested to be allowed to attend him. They were conveyed to Massowah by Capt. Court, while his lordship remained at Mocha. An intelligent active fellow of the name of Pierce, who had deserted the Company's service and turned Mussulman at Mocha, but had repented and made his escape, was added to the party, was very serviceable to Mr. Salt, and was ultimately, at his own desire, left behind in Abyssinia, in order to learn the language of the country, and facilitate any future introduction of English adventurers or traffic. On their arrival at Massowah, the party had to encounter what is amusing enough to read, but must have been exceedingly vexatious to experience, a long series of negotiations, delays, manœuvres, and impositions, contrived by the Nayib and his subjects, who were rogues to a man. The reader heartily wishes them a general and indiscriminate flagellation, only with the honourable distinction of the cat o'-nine-tails to the soldiers, and other miscreants, who were sent to escort Mr. Salt through the country within the Nayib's jurisdiction. It appears sufficiently evident that there would have been an end to the expedition, the property and the lives of the party, in this vile patch of Mahometan territory and anarchy, but for the recently acquired knowledge of the formidable naval power of the English, and the certainty of a prompt vengeance from the ship of force at that time in the neighbouring sea. This cause of apprehension, however, on the part of the barbarians, even combined with their conviction of the palpable impolicy of offending the governor of Tigré, was not enough to save Mr. Salt and his companions from the necessity of exerting their caution and courage, and in several instances threatening an immediate use of their fire arms. The praise of intelligence, resolution, and exemplary self-command, appears due to Mr. Salt's conduct throughout the enterprise.

A clear and entertaining account is given of the proceedings and incidents of the journey; and we do not wonder that so cultivated a man and so accomplished an artist strongly seized on the most remarkable features of the country, and has so discriminatively described as well as delineated them. But the chief value of the narrative consists in its relating such transactions, as afforded a very curious view of Abyssinian manners. Compared with a somewhat protracted residence, like that of Bruce, in the country,

but little that a flying visit to one province of it, made under innumerable inconveniences and restrictions, can enable a man to see or learn of the character of a people and the state of their country; but such as Mr. Salt's opportunities for observation and inquiry were, we think he has done them justice. His accounts, besides their absolute, have also a relative value, as a kind of check on those of Bruce; so far as a transient view of an exterior province of a kingdom may be deemed to authorise a man to confirm or contradict the representations of a traveller who has visited several provinces, and resided a considerable time at the capital; and so far too as the veracity and judgement of the one may be held intitled to be confronted with those of the other. Whatever traveller's reputation may suffer by it, Mr. Salt's narrative will not fail to make a strong impression in favour of his understanding and his honesty. And in addition to the internal evidence which probably every sensible reader will perceive, an effectual security for the veracity of the report is involved in the very object of the journey; which was intended to open such an intercourse with Abyssinia as should give Europeans an easy access to that country, and consequently prepare the way for acquiring a complete knowledge of it, and soon exposing all the falsehoods of travellers.

No satisfactory abstract can be given of the diversified account of the natural appearances and political condition of the country between Massowah and Antalow, the present capital of Tigré, and the limit of Mr. Salt's journey. The face of the country, though the greater part of this space, is broken into a multitude of irregular hills, rising here and there to the dignity of mountains, as in the instance of Taranta, the formidable pass of which will be recollected by every reader of Bruce. It could be approached with no inconsiderable degree of apprehension by the present traveller, who has mounted its dangers, however, and survived to shew how little his mind is infected with the spirit of romance.

"In the most rugged part of the road we dismounted, to ease our mules, and walked for about half a mile; we then remounted, and gained the top without any further difficulty. As soon as we arrived, we found on looking at our watches, that it was only half past two; so that, notwithstanding all our delays, we had been occupied only three hours in performing the exaggerated toils and perils of the passage of Taranta. We were soon overtaken by the men and boys who had charge of our baggage; one of the heaviest boxes, containing ammunition and dollars, of considerable weight, was, to our surprize, brought up by a boy of about thirteen years of age; and one of the walls of our large tent, together with the two poles, were conveyed by one man from the bot-

tom to the top of the pass, in about four hours. It is not easy to reconcile these facts with Bruce's representation of the extraordinary difficulties with which he had to contend during two days in going over the same distance, unless the re-establishment of peace between the Nayib and the tribe of Hazorta, had been attended by a surprising improvement of the road, which is not probable, as by Bruce's own account the trade, if we may judge by the number of slaves, was then fully equal to what it is at present. Besides, we did not meet with a single hyena, or troglodítical cave; and luckily had not "our hands and knees cut by frequent falls, or our faces torn by thorny bushes;" which last, indeed, appears scarcely possible in so open and frequented a path. The only part of our baggage which did not reach us till late at night, was the fly of the tent, and my bed, which were carried on the back of an ox.' Vol. II. p. 486.

To some distance from Massowah, camels were employed in carrying the baggage belonging to the party; in the more interior stages, and through the whole journey on their return, their chief dependence was on mules, and a numerous set of carriers, hired, but at the same time partly forced by some of the principal men in power, to the service. The strength, the training, and the care of the mules are such, that we read of their traversing steep and rugged mountains without so much as once stumbling in the course of a whole day.

A considerable tract of country, to the south and west of the Nayib's territory, appears to be nearly independent of the Abyssinian monarch and his provincial governors, though containing some stations and magistrates that pretend to acknowledge that authority; and it is inhabited by the Hazorta, and a number of other tribes, of whose relative strength and respective boundaries it was impossible to become certainly informed. Indeed, these relations must be constantly varying, from the frequent wars among these tribes, and the greater and less ambition and talent of their chiefs. The Hazorta appear to be the most numerous tribe, and Mr. was informed they could assemble three thousand fighting men; but he does not say whether this muster would comprise almost the whole number of men capable of bearing arms. It probably would, as the state of the country appears to be such as to require every man to hold himself in habitual readiness for fighting, or at least threatening to fight, and, wherever he goes, he as naturally takes his weapons along with him as his clothes. These people, with their spears and their few matchlocks, make but a sorry kind of soldiers after all; and though there is among them a great quantity of bickering and turbulence, of mutual cattle-stealing, burning of villages, and assassinations in a small way, their animosities and hostilities seem rather to amount to

consenting systematic economy for keeping the country in a state of poverty and desolation, than to effect any very tremendous and tragical achievements.

The representation of these tribes places them in some not very definable state between the pastoral and agricultural, their cattle being evidently a principal resource, and yet the fertile parts of the ground being subjected to an imperfect cultivation. The following little sketch of rural economy was taken in the neighbourhood of Dixan.

'Their implements of husbandry are extremely rude, the plough being shaped to the purpose, out of the root and branch of a tree; sometimes indeed a ploughshare of iron is added. Two oxen are invariably yoked to the plough, and it is guided by men alone; in all the other parts of agriculture, the women take an equal if not a greater share. The luxuriance of the soil, which in the low lands will admit of two crops annually, produces a great number of weeds; and the clearing of these is one of the most irksome of their toils. For this they often turn up the ground a second time, and pick out most carefully every root; but as this is not sufficient, when the corn is about half ripe they collect together men, women, and children, forming a line along the field, and with singing and much merriment, pluck forth all the weeds from the corn. The labour of reaping is entirely thrown on the females. On passing any field where the women were at work, they uniformly greeted us with the sharp and shrill cry, which is undoubtedly the Ziraleet, described by Mr. Russel as being used by the women of Syria during the harvest, who also quotes from Pietro della Valle a most accurate description of it, that it is a "sharp and loud cry of joy," made in concert by a somewhat tremulous application of the tongue to the palate, producing the sound of heli, li, li, li, li, li, li, li.' Vol. III. p. 231.

A most beautiful print, representing the inhabitants, employments, and houshold utensils of a house or shed of a family of the Hazorta, come to assist in getting in the harvest, in part of which house Mr. S. and his companions were lodged for a night, is accompanied by the following description.

'In the evening I had an opportunity of observing the manner of living among these people, and of gaining additional information concerning them. Their evening's meal consisted solely of coarse cakes of bread, which were made from the grain collected that day in the field. The old woman first sifted away a portion of the husks, the grain was then ground by her and a young girl, and afterwards mixed up into a thick batter, which was spread out with the hand on a broken dish placed over a brisk fire; the old woman and the girl being in the mean time busily engaged in watching its progress. An old man, who seemed to be the head of the family, was sitting at his ease smoaking a country hookah; a boy of about sixteen was lolling on a seat in a recess at the farther end of the room, and two children, a cow, and a few goats, formed so excellent a group, that I could not resist the pleasure of drawing it. The family had scarcely patience enough to wait till the first cake was

baked, and no sooner was it taken from the fire than it was eagerly devoured; and, that nothing might be lost, the old woman picked out of the ashes every crumb that had dropped. They seemed however to be perfectly happy over this frugal repast, which was concluded with a hearty draught of water.' Vol. III p. 219.

The exceeding prominence given, in the economy of life, to the business of eating, and the eager violence with which the function is performed, are among the most obvious characteristics of barbarous and slightly civilised nations. They can know nothing of that sense of decorum, which avoids the explicit appearance of incessantly making it the leading concern, even when it is so in fact; which assumes a manner of moderation in the employment, and endeavours to modify its grossness by combining it with intellectual and social interests. They have too few such interests to afford such modifying associations, and in most of them the difficulty of obtaining certain and sufficient sustenance necessarily renders it the grand object of every day and hour. In Abyssinia, on the whole a very fertile country, our traveller's descriptions constantly exhibit the predominance of an eager concern about food over all other passions; the wolfish voracity of the meals and feasts of the higher class; and the unremitted eagerness of real hunger in the lowest class, whom he describes as actually half famished. It is no wonder that, in many of the villages on the road, there was such a reluctance to entertain the party for a day or a night, as nothing but the fear of the governor of Tigré could overcome; and no wonder that they were at every stage assailed, both by their native conductors and agents, and by the inhabitants, with most exorbitant demands or requests for equivalents, rewards, or gratuities. These incessant importunate demands were, however, very vexatious, especially when made by the sheer shameless avarice of those who had not the plea of poverty, and when they were attempted to be enforced by rascally imposition and collusion, to which many even of the superior order were not too proud to have recourse.—In general, the party were well supplied with provisions, and if their accommodations for shelter and lodging, while on the road, were but very indifferent, they only shared the inconvenience with the inhabitants themselves, whose dwellings are, almost every where, of the most wretched description. We think the narrative mentions worse instances than the following.

'Captain Rudland and myself' [having been separated from the party in a mountainous wilderness and a stormy day] 'took shelter in a village about three miles from Dixan, under a hut divided into many compartments, and inhabited by several families. They paid us every attention that their miserable means would allow; and an old woman, who

spoke a little Arabic, brought us some water which was much discoloured; among the group we observed two handsome young women, who had fine teeth, and silver rings in their ears. House-sparrows were seen to fly from under the roofs of the huts, and the cattle were lodged in the same apartments as the women and children. The mode of building here is by raising walls of the required height, adjoining, and at right angles, to a steep slope on the side of a hill, and then laying on a roof of sods, pitched so as to correspond with the general descent of the hill, which gives the appearance of caves to these habitations. We much regretted having nothing with us to give these poor people but an empty wine bottle; with this, however, they were well satisfied.' Vol. II. p. 488.

If the reader is told that the travellers sometimes baked their own bread, during a very short halt on the road, he will naturally inquire how this could be done.

'We stopped by the side of Nuzeránch for nearly two hours, baked some bread, made an excellent repast, and afterward bathed in the stream. As the mode of our baking bread is somewhat curious, and may hereafter be useful to travellers, I shall here describe it. Our flour (which was generally the unsifted produce of barley, ground between two stones) was first made up with a little water into dough. It was then flattened out, and a stone (of the hardest consistence we could find) which had been in the mean time heated red hot, was put into the center of the dough, which was afterwards completely closed over the stone into the form of a round ball. It was then put upon the clearest part of the fire, and in a few minutes produced us excellent cakes; at least what we at that time considered as such. This mode of baking bread is in common use with travellers in Abyssinia.' Vol. III. p. 217.

Mr. Salt at length reached Antalow, and was introduced to Ras Welleta Selassé, the governor of Tigré, whose character is given in few words in the latter part of the narrative.

'The kind attentions which we received from the Ras during our stay at Antalow, must ever make me remember him with respect and esteem; yet I do not consider him as a man of any great ability. He gained his power by cunning, rather than by any strength of character; and though not remarkably brave, maintains himself in his high station by a dexterous management of parties. But to accomplish this, he sacrifices in a great degree the importance of his command; for to conciliate a chief, he will often remit a portion of his tribute. His power notwithstanding is very great. After the cruel administration of Michael Suhul, the mild government of the present Ras is most grateful to the Tigreans.' p. 155.

This Ras is quite an old man; has been a considerable fighter, at least conqueror, in his time; is much given to hunting, fishing, chess, and epicurism; and is, in his way, not a little religious. We quote a specimen of his morning devotions and subsequent attention to the weighty affairs of state, from Capt. Rudland's very entertaining journal.

'The Ras was in readiness at an early hour this morning to attend

divine service, which was performed under a temporary building. He sent to me to accompany him, which I of course complied with. On entering the place, there were many priests assembled, who had formed themselves in a circle, chanting the psalms, with a drum or tom-tom in the center. The seat the Ras occupied was screened from the view of all without by a curtain, within which was placed a crown of gold, some frankincense, dried grapes, and wheat; the former was burned, and the two latter were made use of instead of the bread and wine. After the prayers were over, and the Ras had read a chapter in the bible, we all went out on the middle of the plain. The Ras seated himself on the ground, and in an instant two or three of the dresses of his slaves were spread out, being fixed on the ends of their spears so as to form a complete covering to keep off the glare of the sun, which now began to be very oppressive. The chess-board was introduced, and here the Ras continued to play till past four in the afternoon.' Vol. III. p. 120.

'His common adversary at this game, was a man apparently of no rank or consequence, paid for the purpose, and whose great skill appeared to consist in keeping the game alive; always permitting the Ras to be victorious, and to cheat as much as he thought proper.' p. 143.

With so much of this and other serious concerns on his hands, it was impossible the Ras could spare much time for conference with Mr. Salt, about opening a direct trade with England, instead of receiving European and Indian commodities at the third or fourth hand, after an exorbitant addition of price at each transfer. It would be simple enough to expect that men like the Ras should forego a game at chess, or any similar favourite and useful avocation, for the sake of such a thing as promoting the advantage of their country. His subjects, though deplorably ignorant, it is true, could hardly be so totally barbarous in their notions, as to imagine that their being provided with commodious clothing and utensils, and with better means of defence against the Mahometan and Pagan savages by whom they are threatened to be overwhelmed, could be a matter of equal importance with their governor's gaining one more victory on the chess-board over the poor servile gamester who is hired to yield it to him. However, when the Ras *could* spare half an hour from his hunting, and fishing, and chess-playing, and feasting, and consequent sleeping, (for he always slept several hours after a meal) to hear Mr. Salt on the subject of his mission, he appeared to meet the proposals with a ready approbation; and mentioned Buré, a small place belonging to him on the coast, considerably south of Massowah, as a proper port for English ships, promising to acquire and impart immediate information relative to the state and capabilities of the place, by ordering the chief person there to Antalow, and even authorising Mr. Carter to go there to examine it. Through some combination of mismanagement on the

part of the Englishman, with suspiciousness on that of the Abyssinian, this latter part of the promise was not fulfilled. The party were habitually treated with kindness and distinction, and shared the convivialities and amusements of the Ras, though very much restricted as to the liberty of seeing the country, and going where they pleased, excepting Mr. Salt, who, accompanied by Pierce, was allowed to make an excursion to Adowa and Axum. On a remonstrance being made against a degree of restriction almost amounting to imprisonment, the Ras answered in the most courteous and benevolent manner, and doubtless with the most entire sincerity, 'that it was his anxiety about their persons which made him wish they should have no communication with the inhabitants, who were little to be depended upon; and that he would rather lose two thousand of his own subjects than that any one of their (the English) people should come to harm.' The negotiation had been suspended by the evident indisposition of the Ras to confer on the subject, and the absconding of the Mahometan interpreter, who kept out of the way, evidently as a part of some scheme and collusion against the English. After being kept some time in a state of painful uncertainty and uselessness, Mr. Salt at length obtained an effectual explanation with the Ras, through the medium of another and a more honest interpreter. In this conference he found, what he had suspected before, that the most base and assiduous exertions had been made to prejudice the Ras against him and his object, by persons in the interest of the Sheriffe of Mecca, whose commerce with Abyssinia must necessarily be almost annihilated by a direct importation by the English. The Ras acknowledged also that his own chiefs had been constantly urging him to send the English to a distance from his house, asserting that they meditated his destruction, and advising him not to eat or drink in their presence for fear of poison. His declaration that all this had made no impression on his mind unfavourable to his English visitants, was disproved by his earnestly requesting them, when near the time appointed for their departure, to swear that whatever physic they left with him should not poison him. This request was complied with, and we cannot, without some degree of wonder, read Mr. Salt's account of its effect.

'This ceremony had a great effect upon the Ras; he seemed perfectly happy in consequence, and declared that he should ever esteem the English as his best friends. From this it would appear that great respect is paid here to the solemnity of an oath.' Vol. III. p. 147.

There was no further interruption of this state of frank intercourse and mutual complacency. The Ras remained

firm in his approbation of a direct traffic with the English; and some kind of communication must have taken place between him and the person bearing the title of king of Abyssinia, for, on the eve of Mr. Salt's departure, 'letters were delivered to him by the Ras, from his sovereign, for the king of England, which Mr. S. was requested to convey safely to Lord Valentia. With them several complete dresses, of the finest cloth, manufactured in the country, were sent as presents. These were delivered in great form.'

This unfortunate monarch is or was called Ayto Gualoo, and was put on the throne in substitution for some former nominal occupant, by Gusmatie Guxo, chief, or governor, or whatever it may be called, of Begemder and Amhara. The governor of Tigré, though no friend to Guxo, had been induced to sanction this piece of king-making, and had married his majesty's sister. After a short time Guxo had thought proper to be very imperious at Gondar, had insulted his puppet monarch, and forced him to marry his daughter, and had plundered the treasures of the church. Our Ras, Welleta Selassé, made such prompt and vigorous preparations to punish this sacrilegious rebel, that he was brought to humiliating concessions, and a surrender of the plunder. But he meditated revenge; and, at the time of Mr. Salt's visit to the Ras, Guxo was raising the whole force of Begemder and Amhara, and one of the Galla tribes, and the Ras was assembling the army of Tigré, in order to decide finally who should be the first man in Abyssinia, and should consequently monopolise the manufacture of kings. The army was mustered at Antalow while our travellers were there, and the Ras professed to defer the commencement of its operations, solely to give time for their quiet and secure return to Massowah. What might take place within three months after their leaving the country, and whether Ayto Gualoo, Gusmatie Guxo, Welleta Selassé, all or any one of them, are now alive, is just as uncertain as the state of a country which has changed its monarch little less than a dozen times since Bruce was there, while the several provinces have not been unambitious to imitate the example.—One of the most curious parts of the narrative is the account of the Ras's military review.

'We found the Ras seated in a small verandah in front of a building which overlooked a walled inclosure about 300 yards in circumference. Around him were seated many of his principal chiefs. He received us with his usual attention, and placed us immediately beside him on his couch. It is difficult to describe the scene that ensued. The outer part of the inclosure was lined with crowds of the inhabitants, and others had mounted the walls, which soon were completely covered with them. Opposite the Ras was a gateway, in a room over which sat a number of

officers of state, appointed to regulate the review. Through this gateway the chiefs came in separately, one after the other, each with his respective followers. First entered the cavalry, with their chief at their head, galloping round the circus, and brandishing their spears with great agility. The dresses of these consisted for the most part of kincaubs, embroidered damask, flowered with gold, or black velvet studded with ornaments of silver, thrown as a scarf over their shoulders, and fastened with a gold clasp across the breast. Round their heads they wore bandages, formed of yellow, green, and red satin, tied behind, long, and streaming loosely as they rode. Some, instead of this ornament, had only fillets of skin round their heads, the hairs of which standing upwards, gave an additional wildness to their appearance. Some few had horns of gold, either perpendicular above their foreheads, or projecting forwards; and several, on the upper part of their arm, had a silver disk, of both which Bruce has given a representation. Others wore bracelets of silver, in the shape of a horse collar, round their right arms, equal in number to the enemies they had slain. The horses were richly caparisoned, and bore on their fronts the bloody garments of foes slaughtered by their riders. Each chief, after riding round the circus seven or eight times, presented himself directly before the Ras, in a menacing attitude, recited in pompous language the actions he had performed, and concluded by throwing down before him the indubitable trophies of his valour, which had before been hanging above the bracelets on his right arm.* One chief brought only a knife that he had taken from his opponent. The chiefs are not the only ones who thus present themselves before the Ras, for every ragged rascal, among the foot soldiers, who enter in a throng after the horsemen, has the same privilege. Among these latter, horrible to relate, were some wretches, probably followers of the camp (for they were not soldiers) savage enough to produce unquestionable evidence that boys, not men, had been the victims of their fury. At this I expressed to the Ras my abhorrence so strongly, that, actuated by the same feelings, he refused them those marks of his approbation which he had invariably shown to others. The inferior warriors were clad in skins, chiefly those of sheep, some of which were bordered with blue and red of different shades. Intermixed with the foot soldiers, who were mostly armed with spears and shields, the matchlock men came in most irregular order to the number of at least fifteen hundred, whose gestures were, if possible, more ludicrous than those of the spearmen, imitating, as it appeared to me, men hunting wild beasts among the bushes; the conclusion of their frolic was firing their musquets as nearly as possible to the legs of their opponents, then drawing their knives and making a blow to finish the murderous execution of their matchlocks. There were in this way many single mock fights between the spearmen and musqueteers, but it was always managed that the latter should prove victorious. This extraordinary review was concluded by the

* 'Ludolf speaking of this custom among the Galla, from whom it is probably derived, says, "Adhuc necesse est indicium cæsi hostis post pugnam afferre. Primo quidem capita ceu honestissimam corporis partem attulêrunt; at postquam de sexu imberbium dubitaretur, turpissimum viris amputavêre."'

marching in on one side of the Ras's band, mounted on mules, and beating the heavy drums, and on the other of men bearing the ornaments of the church walking in procession.

'This day greatly biassed our opinion in favour of the horsemanship of the Abyssinians; I think them in this respect fully equal to the Arabs, and, considering the stirrups that they use, which are merely small rings of iron, into which they put the two larger toes, this is no slight praise. In the use of the spear they are particularly expert, and they have a peculiar method of vibrating it in the hand, which has a very warlike and classical appearance. In fine, they seem to be as complete horsemen as possible without discipline, of which, indeed, they are totally ignorant.

'After the soldiers, there were also a great many unarmed elderly men, cultivators of the ground, who came and made their obeisance before the Ras. During this last ceremony he sat very unconcerned, taking little notice of any excepting two of the most conspicuous. During the review the Ras was extremely attentive, and his notice of the chiefs was acutely distributed according to their power.' Vol. III. p. 131.

We have not room for the still more curious account of the grand feast on *brinde*, that is, raw beef, by which this martial exhibition was succeeded. A table was placed along the great hall, loaded with piles of bread in thin cakes, of a foot and a half diameter, made of a grain called teff. There was a single row of 'dishes of hot curry, made of fowl, mutton, ghee, and curds.' The Ras was seated on a couch near one end of the table; there were no benches, and the chiefs ranged themselves on their haunches on each side of the table, several rows deep toward the upper end. Several female slaves, having washed their hands in sight of the company, took pieces of the teff bread, dipped them in the curry, and distributed them to the company. During this time the cattle were killing on the outside of the hall, and presently large pieces were brought in, warm and quivering, and handed round to the chiefs, who cut off steaks, which they dexterously dissected into strips, and greedily devoured. When the first set of guests, consisting of persons of the highest class, were satiated, which was not till a prodigious quantity had been consumed, an inferior class took their places, and consumed the remainder of the *brinde*, leaving nothing but coarse bread to a third, fourth, and even fifth party, some of whom were driven away by the master of the ceremonies before they had taken their fill even of this. As to drink, these latter sets were obliged to content themselves with a small allowance of booza, whereas the superior class had indulged plentifully in maize.

'The whole ended with a violent scramble for the last cakes, during which it seemed to be a point of etiquette to make as much uproar and confusion as possible. During the feast there were a few boys permitted

so remain, by favour, under the table, to pick up what fell from the guests; but if any one be discovered there who has not permission, he is beaten severely by blows given with the elbow. There were also one or two men with small crosses in their hands, which they held out, intimating thereby that they were at that time obliged to fast.'

From this and many other opportunities of observation, Mr. Salt was authorised to contradict Bruce's assertion, that 'No man in Abyssinia, of any fashion whatever, feeds himself, or touches his own meat.' The guests both feed themselves, and hand pieces of the brinde to their neighbours. At the 'table of Gusmati Ischias, who was one of the first fashion at Gondar, when Bruce was there,' our traveller observed some of the chiefs help those next them, and their women; and says that 'if the piece happened not to please the person who cut it off, he handed it to a dependent behind him, from whom it sometimes passed to a seventh hand, if not approved.' In some of the convivial parties, the ludicrous custom of feeding was carried as far as ceremony, or foolery, or kindness, could well go.

'We were fed plentifully by the Ras himself, with eggs, fowls in curry, and balls of a mixed composition of wild celery, curds and ghee, after which we were offered brinde; but on our expressing a wish to have it dressed, the meat was afterwards brought grilled, and cut into small pieces by one of the attendants, and handed to our mouths by the Ras, much in the same way as boys in England feed magpies.' Vol. III. p. 37.

'A fine curry, with bread and maize, was introduced, and the hostess was so polite as to insist on feeding me. As the lady had placed next to me her beautiful daughter, about twelve or fourteen years of age, I gladly made the most grateful return that I was able, by dipping bread into the curry, and feeding her in the same way as I had been treated by the mother.' (Capt. Rudland's Journal.) Vol. III. p. 114.

'The Ras seated me by his side, and fed me very kindly with fish, fruit, bread, and vegetables. After I had eaten a sufficient quantity, I was obliged by nods, winks, and smiles, to inform the Ras of the circumstance, for fear of being choaked with kindness.' Ibid. p. 112.

The people are represented as scrupulous observers of the laws of good breeding established among themselves, and particularly attentive to their friends; and one of the laws of good breeding, among friends, is to 'make a point to feed each other at meals.' From the kind of personal attention, and the approach to familiarity, attending such a practice, it might easily be inferred that reserve is not likely to be a predominant distinction of the general system of manners. And our traveller describes the social parties as indulging in a degree of familiarity, for which it is evident they have not waited to obtain a licence from the sovereign court of British taste. 'In their private parties all are huddled toge-

ther on the ground in a most happy equality. Equals salute each other by kissing whenever they meet, and repeat their compliments over and over again like their neighbours the Arabs.'

'The Ras soon afterwards retired; and we had an opportunity of remarking in what a free and unreserved style the Abyssinians pass their time in private parties. Barrambaras was lying with his head in the lap of Ozoro Esther, whispering in her ear, and another chief was endeavouring to interpret between Captain Rudland and Ozoro Romai. There seemed indeed very little restraint among them; and I do not doubt that they carry their familiarity much further, when perfectly at liberty in the houses of mutual friends.' p. 150.

Mr. Salt should have given some explanation, or some facts illustrative of his meaning, when he says, 'They are savage in their treatment of children, yet respectful towards women, whom nevertheless they, in our opinion, treat with little regard to decency in their conversation.' Wanting decency, what is the respect, and how is it shewn? Capt. Rudland hints, however, that the ladies do not resent the deficiency. At the same time Mr. Salt resents for them, and for both the sexes, the outrageous scandal propagated by Bruce respecting their manners after a brinde feast; manners which that traveller has represented as customary, general, and uncensured among them. 'The gross and disgusting scenes', says Mr. S. 'which Mr. Bruce describes as following a brinde feast, I firmly believe, existed only in his own imagination.' We are much inclined to believe this conviction is correct.

Another unqualified impeachment of Bruce's veracity is pointed at his celebrated relations of Abyssinian barbarity in the manner of devouring animals.

'His account of the flesh cut out of living animals was repeatedly inquired into by our party; all to whom we spoke denied its ever being done. Raw flesh had been observed by all travellers, before Mr. Bruce, as the common food of the Abyssinians, but Mr. Bruce makes no distinction between the two, or rather wishes to confound them together, that he may seem to have the countenance of Poncet and the Jesuits; but none of them ever mentioned the eating of flesh stripped from a living animal, though Mr. Bruce is impudent enough to say that this was the ordinary banquet of citizens, and even priests throughout all the country'. Vol. III. p. 159.

It is this bold representation of the practice as being ordinary and general, that forms the fatal point against Bruce as contradicted by the present traveller. If he had only professed to have known some one, or some very few instances of such abomination, we think the acknowledged barbarism of the Abyssinian customs would fully have war-

ranted our believing such things might have happened, while we could also have taken it on Mr. Salt's authority that no such thing was known as a general custom. But when the question is, whether the practice is absolutely one of the general established customs of the country, and when it lies between Mr. Bruce's assertion and Mr. Salt's denial, we do think there is hardly one reader of the journal before us who will hesitate what to believe.

It was natural for our traveller to be extremely inquisitive concerning his celebrated predecessor. He found that Bruce's visit in that country had been an event of great notoriety and interest, and that the design of it had always been regarded as somewhat mysterious. Mr. Salt conversed with several persons who had known him, and we think it will be worth while to quote some parts of their testimony.

'Basha Abdalla treated us with great attention; and we gained, during our visit, much interesting intelligence, there being present an old man, at that time in the service of Yannes, who went hence (from Adowa) with Bruce to Gondar, and several other persons well acquainted with the transactions of the last thirty-five years. They agreed in telling us that Bruce passed four months at Adowa, that he did not speak the language of Tigrê, but afterwards made himself in part acquainted with the Amharic; that he was two years at Gondar, visited the source of the Nile, and was robbed of his books and instruments; that two of the battles of Serbraxos were fought some time (two years) before he came into the country, and that a third engagement took place afterward at the same spot, at which, however, Bruce was not present, as he never went out to war, and, at the particular time alluded to, was actually at Gondar; that the king gave him a house, but no land, command, or employ, during his stay in the country; that he was a good horseman, and used to shoot from his saddle; that he had two interpreters, Michael and Georgis, of whom the one spoke Greek, and the other wrote Arabic; and that when he was at Adowa, he resided in the house of Yannes, who sent fifteen mules for him down to Dixan.' Vol. III. p 177.

'In the early part of the evening I managed to get a few questions concerning Bruce answered by the old gentleman, (Gusmatie Ischias, a son of Ras Michael). He stated that Bruce was a great favourite with the king, who gave him an excellent house to live in, and provided him with food, but that he never gave him any land or command; that he was much with the Iteghé and Ozoro Esther, and but little with the Ras; that he never went out to war during his stay in the country, but kept much in the house, and was very curious after plants, stones, &c.: he added that, at that time, he himself commanded Ras-el-Feel, and that he was at the hunting match at Tcherkin, at the time Bruce was there on his way to Sennaar.—I had every reason to be convinced of the authenticity of this relation, from its agreement with the accounts which had been given me by the many persons to whom, at different times, and in different places, I had applied for information respecting Bruce.

'Hadjee Hamed, a man of about fifty-one years of age, remembered

Bruce very well, and said it was thirty-five years since he came into the country; that he continued in the country between one and two years, and was well received by the king, Tecla Haimanout, who used to give him money, and daily send him provisions, but that he held no government nor land under him. Ras Michael gave him a house at Koscam, but never employed him in any of the offices of state; he was a favourite of the Iteghé and Ozoro Esther: he went to the Nile, and was robbed on his way thither by the son of Absa Bega, at Korringa, and that he (Hadjee Hamed) was the person sent by government to recover his property.* He declared positively that Bruce never had any country given him, not even at the head of the Nile; nor was any command conferred on him, either by the king or the Ras; nor was he in any of the battles between Fasil and Ras Michael. He generally lived at Koscam with the Iteghé, by whom, as well as by the king, the Ras, and Ozoro Esther he was much respected, &c.

'Yusuph, interpreter to the late Aboona, whom he accompanied hither from Alexandria thirty-five years ago, said he knew Bruce well, and sent three of his own people to attend him to Sennaar; that he heard of his having got safely there, but had never learned what became of him afterwards. He spoke of him with much regret, and appeared sorry to hear of his death. He and every one with whom I have conversed confirmed the character of Ras Michael as given by Bruce.

'In the different conversations I had with the Ras, I endeavoured to turn the conversation on the subject of Bruce's arrival in the country. He spoke of him extremely slightly, and evaded any question concerning him as much as possible. All I could get out of him was, that he came into the country immediately after the battle of Fagitta, when he himself was appointed to the provinces of Begemder and Amhara; that Bruce went to the head of the Nile, and was not present in any engagement, nor held any public situation in Abyssinia; and that they never could learn why he came into the country.'

The accounts given by other individuals, just to the same effect are added, and Mr. Salt observes on them collectively,

'These testimonies, together with the accounts given by Ayto Ischias, by the priest whom I met on my return from Aram, and by the servant of Yunus at Adowa, compose a mass of evidence sufficient, in my opinion, to throw great doubt on the authenticity of the account given by Bruce of many of the transactions in which he represents himself as concerned, during his residence in Abyssinia.' Vol. III. p. 208—211.

We had intended to collect into one concise enumeration the various particulars in which lord Valentia and Mr. Salt have controverted or contradicted the statements of Bruce; but on review we find them too many, and some of them not sufficiently important, for such a formal indictment. A number of them we have noticed or quoted already: some of the remaining charges are, that he has given a Greek inscription which he pretends to have seen on a part of the ancient structure called the King's Seat at Axum, whereas Mr. Salt

* Hadjee Hamed could then be but *sixteen* years old.

on examining the identical stone with the utmost possible attention, found not the smallest trace of any inscription,—that Bruce has given a very erroneous description and drawing of the grand obelisk at Axum,—that he has described as an ancient wall in that neighbourhood, and even as a wall with a vast number of 'pedestals for colossal statues of Sirius, the Latrator Anubis, or Dog Star,' of which statues he says two remained at that time though in a mutilated state, what Mr. Salt pronounces to be purely a natural stratum of rock, without the slightest relic of any such decorations,—that Bruce has given an utterly erroneous statement of the direction of the route by which both the travellers advanced into Tigré, and of the bearings and distances, relatively to the points of the compass, to the sea, and to one another, of the towns and stations which they visited,—that in his chart of the Red Sea, the line of the coast, to a considerable extent to the south and north of Massowah, is grossly incorrect,—and that there are the strongest reasons to believe (we confess they appear very strong) that the account of his voyage to the Straits of Babelmandel is entirely fictitious. As to this last particular, lord V. observes that,

'Bruce's description of Perim, (the island in the Straits) as five miles long and two miles broad, when in fact it is only three miles long and not one broad; his assertion that the narrow Straits of Bab-el-Mandeb are two leagues wide, when in fact they are not one; his calling the islands in the great Straits low, when in fact they are lofty rocks; and his account of the chain of hills along the African shore, when the hills are single, and at a great distance from each other, are errors which a person who had visited the spot could never have fallen into.' Vol. III. p. 285.

The detection is more pointedly successful, relative to the celebrated adventurer's account of his course by the islands a little south of Loheia, which port was, in lord V.'s opinion, the utmost limit of the voyage. His lordship concludes his charges in the following words:

'It is greatly to be lamented, that a man of Mr. Bruce's talents should have given way to a vanity which has caused his book to partake more of romance than reality. The difficulties which opposed his progress must have been sufficiently great to have obtained for him the just praise of perseverance and courage; and the country through which he travelled afforded novelty that must have excited the interest of every reader; yet, as it is, he has so mixed the truth with the falsehood, that it is impossible to separate them; and the deceptions which have been exposed, where any traveller has followed him, give but too much reason to fear, that the same would be the result, were a person of veracity to visit Ras-el-Feel, or Sennaar.' Vol. III. p. 287.

Amidst our anger at the convicted romancings of this intrepid and accomplished adventurer, the partiality which

remains, from the powerful interest which his book excited in our minds, has caused us some difficulty to be pleased at the strong marks of willingness with which lord V. and Mr. Salt apply their castigation. The just accusations are not perhaps combined with quite a sufficient readiness to acknowledge the arduousness of his enterprise, and how much, in accomplishing it, he surpassed the exploits of every contemporary. We think a more marked disposition of this kind was peculiarly due from travellers, who, from their authorised character and the powerful securities for their impunity, surveyed or penetrated the margin of Africa with so many advantages, to the man who, as a mere private individual, trusting in a great measure to his own resources, daringly invaded the interior of that melancholy continent, maintained his consequence and prosecuted his schemes by means of his own personal qualifications, and at last effected his retreat through the most tremendous deserts and barbarous tribes. There is a difference between these two enterprises, perhaps, somewhat like that between a man who should venture a little into the edge of a torrent or whirlpool, firmly holding by the branch of a tree bending from the bank, or firmly held by a rope in the hands of friends, and another man who should throw himself in, and commit himself to an unassisted conflict with the element.

Besides, we may fairly question the justice of pronouncing, with lord V., that Bruce's book 'partakes more of romance than reality,' when it is evident, even from Mr. Salt's own journal, and much of his lordship's, that in the grand leading features Bruce's book is true. The memoirs of state transactions in Abyssinia, in Bruce's time, and the periods immediately preceding, were found to be correct, as far as Mr. Salt had the means of inquiring. The truth of his delineation of particular characters, especially of Ras Michael, was confirmed by all the testimonies of surviving contemporaries. With a small measure of exception, the general estimate which results from his various representations of the character of the nations, both Arabs and Abyssinian, appears strikingly just. Many of his descriptions and delineations of the natural productions of the country, were verified by Mr. Salt. A large proportion of his account of his situation at Gondar, of his intimacy with the principal persons of the court, and of his pertinacity and adventures in prosecuting his object of reaching the fountains of the Nile, were confirmed by multiplied testimony. He accomplished so very much that was adventurous, and witnessed so very much that was strange, that the mere truth would have made one of the most interesting narratives ever given to the world; and with lord V. we deeply regret, that

he should have thought it necessary to aid its effects by a large share of exaggeration, accommodated statement, and fictitious incident. From the charge of this guilt, we fear he will never be vindicated.

There seems a sort of melancholy ludicrousness in mentioning the *Christianity* of Abyssinia. Something so named, however, does retain a precarious existence, in the shape of priests, a few churches, a few old books, superstitious ceremonies, and numerous pictures of St. George, who appears to be the favourite saint. They are prompt to avow themselves Christians, on being visited by foreigners; and have a degree of pride in being so distinguished from the Mussulmans and Pagans. Nor are they disposed, as it should seem, to let these foreigners, when ostensibly bearing the same distinction, escape without some trial of their attainments in religious knowledge. We remember Bruce's orthodoxy was brought to the test, and we should have been pleased if Mr. Salt had given the account of his own examination somewhat more at length than in these sentences.

'In the evening I had a visit (at Axum) from the chief priest and others, who came with their books to try me in the scripture. My knowledge, though not very great, was fortunately fully equal to enable me to answer or evade all their questions, so that I came off with great credit; and the High Priest kissed my hand in rapture at my intimate acquaintance with the sacred book.' Vol. III. p. 88.

Few of their religious observances are particularised; the most obvious one was their frequent fasting, much according to the Roman Catholic sense of that word. The Ras was particularly observant of this duty. They have a sufficient number of religious ideas to make their profound ignorance deplorably superstitious. Various instances of this were shewn in relation to Mr. Salt himself, to whom preternatural powers were several times attributed; in one instance he was believed to know future events, in another to have been assisted by the spirit of an ancient king, and in several others he was seriously solicited to cure blind and dumb children.—He gives a more favourable account than Bruce of the manners of the priests, at least those of Axum.

He twice visited Axum, once by way of excursion from Antalow, and next on his return to the Red Sea. He was shewn a large upright stone with an ancient Greek inscription, which Bruce does not mention, and probably did not see. A reduced fac-simile of the whole is given from a drawing, which he took the most anxious and repeated care to render perfectly faithful. In the name of 'Aeizanas, sovereign of the Axomites, and Homerites, and Rhaeidan, and the Aethiopians, and Sabaeites, and of Silee, and of Tiamo, and the Bougaeitae, and To Kaens (Τοχαιν) king of kings, son of

God the invincible Mars,'—the monument relates a successful expedition against a rebel nation, and the humanity that was shewn to the vanquished. Mr. Salt ventures to assign the monument to the earlier part of the fourteenth century, makes a number of learned observations, and draws several well warranted and rather interesting inferences relative to the ancient history and religion of Abyssinia.

At Axum and Adowa Mr. Salt met with more benevolence and refinement than in the other towns; and at the latter place he had several entertaining and very friendly interviews with a princess, who afterwards took Pierce under her special patronage. Adowa was formerly the capital of Tigré; and the cause assigned by the people for the Ras's deserting it is, that the principal buildings having belonged to one of his subjects, who had been forcibly expelled, and then murdered by the Ras's people, in order to his taking possession, the ghost of the deceased appeared one night to the Ras, and beat him violently, in consequence of which he has never been there since.

Without any remarkable dangers or adventures our party returned to Arkeko, near Massowah; and one of the first things they saw was their ship, the Panther, most opportunely arriving at that precise point of time, with their excellent friend Capt. Court, to receive them.—It is impossible for us not to have been highly gratified by this journal of Mr. Salt, which has enabled us to visit, at last, a part of a most secluded country, with a guide to whom we can give our entire confidence. It bears every where the most satisfactory indications of fidelity, intelligence, and vigilance. We hope Mr. S. has before this time made his way to the centre of Abyssinia; we do not say that a small degree more of a speculative and philosophical cast of mind would not have made him a more complete traveller; but on the whole we are much pleased that the office of surveying Abyssinia for the information of Europe, and giving, as we trust, at no distant time, a more authentic account of it than we yet possess, has been committed to such a man. A peculiar interest will be excited in behalf of that unhappy country, by the statement of its condition, with which he closes an ingenious and learned dissertation on its history.

'At the present moment, the nation, with its religion, is fast verging to ruin; the Galla and Mussulmaun tribes around are daily becoming more powerful; and there is reason to fear that, in a short time, the very name of Christ may be lost among them. Some events have lately occurred likely to hasten their fall; namely the death of their late Aboona Marcos and the failure of their endeavours to procure another from Egypt.

this the last tie which bound them to the mother country is cut asunder; divisions among the priests have already ensued, &c. &c.' 'To this may be added, that the little learning they have among them will soon be exhausted, being entirely cut off from the source that supplied it.—It appears to me, that these circumstances call for the serious consideration of all Christians; for when so much trouble is taken, and so much expense incurred, in endeavouring to convert infidels to the faith; might it not be of equal or more consequence to give relief to a nation already professing, generally, the same faith with ourselves, who at so very early a period received the Christian religion, cherished and defended it against its open and secret enemies; and who still maintain it, not pure indeed, but as their established faith; and to prove that they are a people not unworthy of our care, let us refer to what the Jesuits have said of them, at a time indeed when they were friends; but which, as Ludolf well observes, they never afterwards contradicted.'

Some of these testimonies to the inquisitiveness, docility, hospitality, and attachment to the Christian religion, of the Abyssinians, are quoted, and confirmed by the report of the traveller Poncet: Mr. Salt thus concludes,

'In addition to these, my own observations tend fully to corroborate what I have here quoted. I believe them in general to be possessed of most excellent inclinations, with great quickness of understanding, and an anxious desire of improvement; and I am fully persuaded that there is no part of the world where European influence might be exerted with more beneficial effects than in Abyssinia.'

This appears to us a very interesting subject for speculation. In the interior of Africa there is a nation which very early received Christianity. From various causes their knowledge of this religion has become so obscured, as nearly to reduce it to a few historical facts, prominent names, and ritual observances. Still it has been so far maintained, as to preclude the prevalence of any other religion; the people are tenacious of the Christian name, and would be well disposed to receive Christian knowledge. Without European interference, they are likely, in a very few years more, to be finally overrun by the surrounding tribes of absolute savages, partly Pagan, and partly Mahometan. This catastrophe would involve the destruction of all the institutions which preserve the name, and some small measure of the knowledge, of Christianity; and would probably involve too the exercise of a rancorous intolerance against all that retained any trace of its profession. A very small supply of English knowledge, arts, arms, and agents, quietly introduced through the channel of commercial intercourse, under the express and most willing sanction of the king of Abyssinia and the governor of Tigré, would completely vindicate and secure the independence of the country, would probably restore its tranquillity, and would

thus obtain a most advantageous ground for the exertions of the friends of Christianity and civilization. As an exceedingly subordinate object, we should not neglect to add what is so strongly insisted on by our travellers, that we should obtain a profitable market for our British and Indian exports, and an advantageous position in the Red Sea for frustrating the designs of the French against our eastern possessions. May we humbly presume to hope, that an object like this may have any chance of obtaining a moment's attention of a Christian nation that can afford to spend so much more than a million sterling a week for promoting the tranquillity and improvement of the world, when that Christian nation shall have concluded its more generous and dignified employments of fighting for the re-establishment of the inquisition, and manuring the opposite coasts with the thousands of dead bodies of its troops?

The information relative to the practicability and advantage of a direct trade with Abyssinia was laid by lord V., at his return, before the India company; and was treated, as he states, with entire neglect. A private house, however, that of Messrs. Jacob, was so convinced of the justness of his representations, as to be induced to make an earnest, and, at length, successful application for the permission of sending a ship to the Red Sea. The permission could not fail to be cramped by various restrictions; but the ship sailed at the end of February, 1809, with Mr. Salt on board, who had in charge some rather valuable and splendid presents from our government for the king and the Ras, among the rest two curricle pieces of artillery, with the harness complete, 150 rounds of ball, and a quantity of powder.

When all on board their ship, our travellers did not remain long on the African coast; but long enough to have a just occasion of firing a few harmless shot at Arkeko, and to encounter, between a storm and a bay of rocks, the severest peril they had experienced during all their wanderings. After being many hours on the very point of destruction, they were delivered by a slight change of the wind, which took place nearly at the very moment that their last cable parted. The whole description is extremely interesting. In great want of every kind of supplies, they directed their course to Jidda, where the transactions, the principal characters, the general manners, and the political state and movements, furnished the materials for a long and highly entertaining course of description. This is followed by a still more entertaining account of the transactions at Suez, where our travellers parted with their ship, and its meritorious commander Capt. Court,—and of the

journey, in company with a caravan, which was escorted to Cairo by a gallant Arab robber at the head of his gang.

The remainder of the work relates a variety of journies and researches in Lower Egypt. Lord V. naturally wished to visit Upper Egypt; but the Captain Pasha, though very polite and friendly, would not hear of any thing so mysterious; for his lordship found it impossible to make the Turkish chiefs comprehend that mere curiosity could be the motive to such a journey. Our traveller displayed a laudable activity, in the examination of all the antiquities to which he could obtain access, (several of them not much noticed by his numerous predecessors)—and in his accurate survey of Alexandria, of which he has given a very large and distinct plan. But the most valuable parts of the account of Egypt, are those which exhibit the state of its inhabitants and its governments: and the picture is truly the consummation of wretchedness. The much greater part is cursed by the governments and the contests of the Beys, of whom the people declare they should be glad for even the French to rid them. And the part that yet remains under the Turkish power, is not less desolated by the robberies and murders of the execrable Albanian mercenaries. Unless some European power take possession of it, the country will in due time be surrendered to the sands of the desert and the marshes of the Nile. Lord V. says the misery of the people at Alexandria, and along the coast in its vicinity, has been greatly heightened in consequence of our late stupid military attempt upon it; and that the favourable regard in which we were previously held by them is of course turned into resentment and detestation.

In closing our review, (which we have purposely extended to an unusual length, in order to gratify, as far as possible, the curiosity most of our readers must feel concerning a publication, to which few comparatively can have a ready access,) it is but justice to say, that though we are not fully satisfied with the work as a whole, it has, however, improved upon us as we have advanced; and that the two latter volumes contain a good portion of valuable information, and a great deal of entertainment. The additions it furnishes to the public stock of knowledge, consist chiefly of the authentic information concerning Abyssinia, and the very valuable corrections of the hydrography of the Red Sea. A chart of that sea is given in two whole sheets, and will probably supersede all former ones; at least it is an indispensable addition. We cannot be content to dismiss the work without repeating our admiration of its superb set of engravings.

Art V. *Discourses on the Miracles and Parables of our blessed Lord and Saviour Jesus Christ.* By the Rev. William Dodd, L.L.D Lecturer of West-Ham in Essex, and of St. Olave's, Hart-street, London. Second Edition. 4 vols. 8vo. pp. 1350. Price 1l. 10s. boards. Hatchard, Rivingtons, Maxwell and Co., &c. 1809.

THE unfortunate author of these Discourses, intoxicated with clerical popularity, and misled by an inordinate passion for show, in attempting to extricate himself from difficulties in which his imprudence had involved him, became the victim of our sanguinary code, or rather of that relentless spirit of commerce which is ever eager—in England or in Africa—to barter blood for money. We shall not be suspected of a wish to extenuate the guilt of forgery, when we observe, that, though judicial tribunals can only regard the criminal act, a just philosophy will animadvert on the vicious principle; that it will condemn the worldly spirit, the ambition of pomp and splendor, the habit of heedless or exorbitant expense, which thousands indulge without compunction or reproach, who, while they fancy themselves more virtuous than Dr. Dodd, are only more fortunate or more discreet.

It is not surprising that his gloomy fate should have obcured the merit of his Discourses, while it invested his Prison Thoughts with a solemn charm which enables them to outlive superior poems. The basis of his popularity as a poet was the tomb of his character as a clergyman. We are willing to sympathize with his penitence, his griefs, and his terrors, when we have ceased to respect his instructions; and can listen to that voice from the cell, which we could no longer relish from the pulpit. Perhaps it is time this feeling were suppressed; and, after a comparative seclusion from notice which decorum seems to have demanded, and the public sentiment to have enforced, these discourses may be allowed to reappear, and claim that degree of attention which is due to their intrinsic merit.

Discourses avowedly written on the Miracles and Parables of Christ, are likely to excite expectations which it would be hard to gratify. The subjects themselves expand the mind to the utmost stretch of its elasticity. In the Miracles of our Lord, we behold substantial proofs, that both his character and mission were divine; in his Parables we perceive the most instructive lessons, delivered in the most appropriate, attractive, and impressive similitudes: in both we are invited to contemplate all the solemn and affecting aspects, all the mysterious relations, and awful intercourse, of the Supreme Spirit and the human race. To do justice to these subjects, was an attempt in which it could not be expected that Dr. Dodd should completely succeed. In what respects, however, he

performance is intitled to the favour of our readers, we shall endeavour as briefly as possible to explain.

The first two volumes contain thirty one discourses on the different Miracles of Christ. Our author amply details the various circumstances which, in every particular case, demonstrate the intervention of omnipotence. The most popular objections, either to the credibility of the fact, or to its miraculous nature, are investigated with freedom, and frequently refuted with address; though the argument is not always delivered with such force, as to stamp conviction except upon intelligent and ingenuous minds.

Closely connected with these miracles, is the divinity of him by whom they were performed. This is an article of which the author seldom loses sight. Every miracle displays this momentous truth; and in each discourse he gives it a prominent station. Duly attentive to the order, relation, and subserviency, of the various parts of the discussions, and the inculcation of practical godliness in which all should result, he first proves the miracles to have been real facts, not impostures; hence he argues the divine agency; and thus establishes the divinity of our Lord,—a doctrine, which gives solemnity to our religion, and enforces its holy precepts by the most engaging and effectual motives.

On the certainty that a miracle was performed in the resurrection of Lazarus, the writer observes,

'One of the greatest infidels (Woolston) and most professed opposers of our Saviour observed—"It will be granted on all hands, that the restoring a person indisputably dead to life again, is a stupendous miracle: and two or three such miracles, well circumstanced and credibly reported, are enough to conciliate the belief of mankind, that the author of them was a divine agent, and invested with the power of God, or he could not do them." Now we have two or three such stupendous miracles, that of the daughter of Jairus, of the widow's son, and this of Lazarus. Not to speak of the former, though equally well circumstanced and credibly reported, that Lazarus was indisputably dead, that this miracle is well circumstanced and credibly reported, no man of the least observation can deny. And whatever Woolston, and other infidels in former ages may have done, we perceive that they who had the best opportunity as well as inclination to examine and disprove the fact, if false, never once attempted to do so, but, as I before observed, founded their resolution to destroy our Lord upon the notoriety of the fact, too evident to be disputed. *What do we*, say they, *for this man doeth many miracles?* Nay, and when they sought so studiously for false witnesses to put him to death, we never find that any of his miracles were disputed, or himself and his followers treated as impostors with regard to these. Moreover the Jews themselves in their Targums have given in the strongest evidence to the reality of the works wrought by Jesus, confessing the performance of them, which is all we want, but denying the divinity of the agent, and supposing them wrought by I know not what influence, derived from the ineffable name Jehovah, which

they suppose he stole from the holy of holies! As reasonable a solution of the matter, as that given by their fathers; *he casteth out devils, through the prince of the devils!* Strange and blind perverseness! yet such as should confirm us in our faith, and lead us from the works to look to the divine work-master, and to confess with Nicodemus, that *no man could do the miracles which Jesus did, except God were with him.*' Vol. II. p. 304.

If we turn from the miraculous evidence to the practical truths of Christianity, we shall find them most amply enforced in the two succeeding volumes; in which the parables of Christ are ingeniously elucidated in thirty three discourses. Much judgement is displayed in the selection of their predominant features; few of which are suffered to pass unnoticed, that appear at all applicable to the illustration of moral truth. In each parable the author discovers some important doctrine; and from these doctrines he infers those practical lessons, which the parable itself was apparently designed to inculcate. These he often applies to the conscience, with a peculiar degree of energy, which seems the pure emanation of the heart, accompanies the doctrines he enforces in almost every form, and breaks forth sometimes with unusual and unexpected force to flash conviction on the most heedless reader.

The language is plain, and unadorned with figure. But it is bold, nervous, and impressive; abounding with scripture phrases; intelligible to all capacities, and suited to the seriousness of the subject. With those who prefer utility to ornament, this will be no contemptible recommendation. The following passage concludes his discourses on the Pharisee and Publican.

'Alarmed by the sense of the dreadful nature of sin, let us, my brethren, as we tender our salvation, fly from it; and fly to Christ, fly from that which will for ever ruin both body and soul, fly to him who hath shed his blood to redeem both, who is Almighty to save, whose compassions fail not, and who will gladly welcome the humble prostrate Publican. Let us dread nothing, fear nothing, guard against nothing so much, so carefully as against sin, the only enemy that can harm us, the only serpent that can sting us: and let us unite the humility of the Publican to the zeal and strictness of the Pharisee, let us be as careful and diligent as the one, yea and far more so, to serve God in all the appointed duties, and let us be as far from trusting in any thing we do, as the other, remembering that God is all and we are nothing, we are the clay and he is the potter; we are sinful worms, dust and ashes, and he is Almighty and eternal: that all we have we have received of him, life and breath and all things: that all we can do must proceed from his free grace and goodness; that all we can have must flow from his free mercy, who gave his Son to ransom us, when we and all we have were lost and forfeit to him; remembering that we are but of a day here, pilgrims, passengers, and strangers, let us resolve to secure our future and better interest: and therefore with the deepest humility cast ourselves at his feet, with the utmost self abasement, acknowledging ourselves to

worthy the least of his mercies; yet let us with the utmost confidence implore those mercies for the bleeding Jesus' sake, and with the warmest love and gratitude testify throughout all our lives, the deep sense we have of his redeeming grace and love, and the unbounded gratitude of our hearts, for that he hath been pleased to make us partakers of that unspeakable grace and inestimable mercy.—In which, may we all so share here, as to unite with all the saints in the new song to the honour of our redeeming God, Thou art worthy to take the book and open the seals thereof, for thou hast redeemed us to God by thy blood, out of every kindred and tongue, and people and nation.' Vol. III. p. 261.

Little or no discrimination has been used in selecting these specimens. Any other discourse would have furnished examples, equally characteristic; and some passages might have been chosen still more intitled to respect. We are persuaded that the work was intended to instruct and benefit mankind in the most important sense; and are of opinion that it is well adapted to accomplish this inestimable object, though not to astonish with the display of learning, or captivate with the charms of eloquence.

To confirm or illustrate the writer's sentiments, a variety of notes are occasionally introduced; which furnish many striking and judicious observations, but are chiefly valuable for the references they contain to numerous works, in which the respective subjects are more amply discussed.

Art. VI. *Philosophical Transactions of the Royal Society of London,* for the Year 1809. Part I.

(Concluded from p. 764.)

THE next paper in order is

IV. *An Account of a Method of dividing astronomical and other Instruments, by ocular Inspection; in which the usual Tools for graduating are not employed: the whole Operation being so contrived, that no Error can occur but what is chargeable to Vision, when assisted by the best optical Means of viewing and measuring minute Quantities.* By Mr. Edward Troughton. Communicated by the Astronomer Royal.

It is impossible to give any intelligible abstract of the contents of this communication, without the assistance of the plates by which it is illustrated; and we must therefore refer such of our readers, as feel an interest in the subject, to the original paper. They will find the improvements Mr. Troughton has introduced, both ingenious and solid; and calculated to give perhaps the highest possible degree of accuracy to one of the most delicate and difficult of manual operations. The general advantages of Mr. T.'s method cannot be better expressed than in his own words,

'The number of persons at all capable of dividing originally, have hi-

therto been very few; the practice of it being so very limited, that in less than twice seven years, a man could hardly hope to become a workman in this most difficult art. How far I shall be considered as having surmounted these difficulties I know not; but if, by the method here revealed, I have not rendered original dividing almost equally easy with what copying was before, I have spent much labour, time, and thought in vain. I have no doubt indeed that any careful workman who can divide in common, and has the ability to construct an astronomical instrument, will, by following the steps here marked out, be able to divide it, the first time he tries, better than the most experienced workman by any former method.'

Mr. Troughton has relieved his details, and rendered his communication more generally interesting, by introducing a historical sketch of the various modes of operating which have been practised by the most celebrated artists.

V. *A Letter on a Canal in the Medulla Spinalis of some Quadrupeds.* In a Letter from Mr. William Sewell, to Everard Home, Esq. F. R. S. Read December 8, 1808.

The canal described in this paper was discovered by Mr. Sewell, in tracing the sixth ventricle of the brain (which corresponds to the fourth in the human subject) to its apparent termination in the *calamus scriptorius*. It was met with in the horse, ox, sheep, hog, and dog; is sufficiently large to admit a large-sized pin, and extends without interruption through the whole length of the spinal marrow. It is lined by a membrane resembling the *tunica arachnoidea*, and contains a small quantity of fluid similar to that found in the ventricles of the brain. It is most easily distinguished where the large nerves are given off in the neck, and sacrum; and terminates imperceptibly in the *cauda equina*.

VI. *A Numerical Table of Elective Attractions, with Remarks on the Sequences of double Decompositions.* By Thomas Young, M. D. For. Sec. R. S. Read February 9, 1809.

Dr. Young, having been engaged in collecting some of the principal facts in Chemistry and Pharmacy, was led to attempt the investigation of the series of numbers with which we are here presented; and which he found to apply, with about twenty exceptions, to near twelve hundred cases of double decomposition enumerated by Fourcroy, as well as to the received order of simple elective attractions. The numbers, however, are not given as exact measures of the forces which they represent, but as approximations, which, though they may be considered as tolerably correct, yet being calculated to agree with a certain number of phænomena only, will probably require many alterations, when other similar phænomena shall have been investigated. If, however, the attractive force which tends to unite any two substances

nsidered as a constant quantity, Dr. Y. conceives the facts ich have served as the bases of his investigations, consi- red as independent of all hypothesis, will justify the fol- wing inferences. 1. There must be a sequence in all the ective attractions. 2. There must be an agreement be- een the simple and double elective attractions. 3. There ust be a continued sequence in the order of double elective tractions; that is, between any two acids we may place the fferent bases in such an order, that any two salts resulting om their union shall always decompose each other, unless ch acid be united to the base nearest to it; and on the me principle the acids may be arranged in a continued quence between the respective bases, and thus two tables y be formed which will elucidate and correct each other. Dr. Y. has given some tables formed upon this principle, as ell as upon the numerical one, but neither of them ex- nds to the metallic salts; the facts relating to their mutual compositions not being sufficiently numerous to permit eir introduction.

As we have adopted the Roman mode of writing Greek ords introduced into our language, Dr. Y. proposes an al- ration in the orthography of some words used in Chemis- , of which consistency requires the adoption. Thus, ac- rding to the established rules of etymology, Glucine ought be Glycine; Barytes, Barites; and Yttria, Ittria, since Latin word begins with a Y.

VII. *Account of the Dissection of a Human Fœtus, in ich the Circulation of the Blood was carried on without a eart.* By Mr. B. C. Brodie. Communicated by Everard ome, Esq. F. R. S. Read February 16, 1809.

Several instances of monstrosity, similar to that which is scribed in this paper, are on record; but none in which e fœtus attained so nearly to its full growth. It was a twin, d about thirteen inches high though born in the seventh onth. Its external appearance indicated nothing remark- le, and exhibited some merely trifling defects and acci- ntal peculiarities; internally, however, it exhibited some markable deviations from the usual structure. There was heart, thymus gland, or pleura; and the lungs consisted erely of two round masses scarcely exceeding the third of inch in diameter. The œsophagus terminated in a cul de ; and the stomach had consequently only one orifice, con- cting it with the intestinal canal. The liver and its appen- ges were also wanting. On tracing the blood vessels, Mr. found that the trunks of the arteries and veins had no mmunication with each other, and the blood therefore

could only pass from one set of vessels to the other by the extreme capillary vessels anastomosing with each other.

It is worthy of remark, that the vena cava terminated in the umbilical vein, so that the whole of the blood in this instance circulated through the placenta; and it is probable that in this way the deficiency in the muscular powers by which the circulation was carried on, was in some degree compensated, by its undergoing to a greater extent, and in a greater degree than usual, those changes which take place in that organ. It is however a very curious and interesting circumstance, that with a circulating system so exceedingly defective, and carried on solely by the power of the vessels the fœtus should have grown so completely, and arrived so nearly to the state of maturity. Mr. Brodie has added to his communication a short account of the best authenticated instances of similar malformation.

VIII. *On the Origin and Formation of Roots.* In a Letter from T. A. Knight, Esq. F. R. S. to the Right Hon. Sir Joseph Banks, K. B. P. R. S. Read February 23, 1809.

In a former communication to the Royal Society, Mr. Knight endeavoured to prove that the buds of trees spring invariably from the alburnum; it is the object of this paper to assign the production of the roots to the vessels which pass from the cotyledons of the seed, and from the leaves through the leaf-stalks and bark of the tree. Mr. K. observes that the root in all cases is elongated by new parts successively added to the apex, while the stem and branches are enlarged by the extension of parts previously organized; and from hence he infers, that the radicle of the seed is not, as is generally supposed, the future root of the plant, since it is elongated solely by the extension of parts previously organised. The root, he supposes, comes into existence during the germination of the seed, and springs from the point of the radicle. Mr. Knight adduces the following facts in support of his opinion on the formation of roots. Leaf-stalks do not contain alburnum, but have numerous vessels similar to those of the bark and radicle; yet many of them have the power of emitting roots, and, when deeply wounded, a substance similar to that of the bark and young root is produced from the upper lip of the wound, but never from the lower. If the bark is removed from the stem of a tree readily forming roots, as the vine, and any moist substance is applied, roots are soon formed above the decorticated portion, but not below it; and, when the alburnum has become lifeless or nearly so, buds are formed beneath. Experiments were made also upon some young plants of a variety of the apple-tree, which is readily propagated by cut-

tings, and has numerous excrescences on its bark. When mould was applied to these excrescences in the Spring, roots were protruded early in the summer; but if the head of the tree was cut off above the excrescence, and so as to remove all leaves or buds, buds were then produced from the same parts which, when the plant was perfect, had given out roots. Lastly, when alburnum is formed in the root, that organ possesses, in common with the stem and branches, the power of producing both buds and roots. These speculations Mr. K. thinks may be extended to all trees with the exception of the palm tribe; and also to perennial herbaceous plants, the buds and roots of which, he conceives, originate from substances analogous to the bark and alburnum of trees. The opinion entertained by many naturalists, that the fibrous roots of all plants perish annually, is thought by Mr. Knight to be erroneous, as he has not observed it to take place in any degree in trees growing in their natural situations, though it is known to occur to considerable extent in plants growing in garden pots.

IX. *On the Nature of the intervertebral Substance in Fish and Quadrupeds.* By Everard Home, Esq. F.R.S. Read February 23, 1809.

On examining the structure of the *squalus maximus* of Linnæus, Mr. Home found some peculiarities in the spine which had escaped former observation. The fish was thirty-six feet six inches long, and the diameter of the larger vertebræ near the head, seven inches. On sawing through the spine, a cavity was found between the vertebræ, nearly circular in form, and containing about three pints of liquid. The lateral parts of this cavity, by which the concave surfaces of the contiguous vertebræ are united together, were ligamentous and elastic, about an inch in thickness, and having the external portion much more compact and elastic than the internal; so that, when the liquid was evacuated, and the vertebræ brought nearly together by the contraction of the more elastic portion, the internal one projected loosely into the cavity. The structure of this singular joint, which, from the largeness of its dimensions, is perfectly distinct in every part, is thought by Mr. H. to throw considerable light on the general principle on which intervertebral joints are formed; a subject which hitherto has not been well understood. As it is however of considerable importance, we shall extract the following observations.

'The fluid contained in the cavity being incompressible, preserves a proper interval between the vertebræ to allow of the play of the lateral elastic ligaments, and forms a ball round which the concave surfaces of

the vertebræ are moved, and readily adapts itself to every change which takes place in the form of the cavity.

'The elasticity of the ligaments, by its constant action, renders the joint always firm, independent of any other support, and keeps the ends of the vertebræ opposed to each other, so that the whole spine is preserved in a straight line, unless it is acted upon by muscles or some other power. When a muscular force is applied to one side of the spine, it stretches the elastic ligament on the opposite side of the joint, and as soon as that force ceases to act, the joint returns to the former state. This is one of the most beautiful instances in nature of elasticity being employed as a substitute for muscular action.

'The extent of the motion in each particular joint is undoubtedly small, but this is compensated by their number, and the elasticity of the vertebræ themselves.' p. 179.

This structure was found to extend, with some variation, to fish in general, with the exception of the whale tribe; but the smallness of the cavity, and the readiness with which the fluid coagulates after death, had occasioned it to be overlooked. Some approach to it was found, too, where it was little to be expected, in the hog, and the rabbit; but in the ox, sheep, deer, monkey, and man, the structure corresponds with that of the whale; which, from its great size has the various parts remarkably conspicuous, and exhibits in the centre a soft pliant substance without elasticity, but admitting of extension, and more like a jelly than an organised body; and corresponding in its use to the incompressible fluid in other fish. In some other animals, the structure of the spine is very remote from that which has been described. The alligator, for example, has a regular joint between its vertebræ, furnished with synovia and capsular ligament, and having the surfaces covered with articulating cartilage; and the snake has its vertebræ united by a regular ball and socket. From the comparison of the facts which have been stated, Mr. Home infers, that

'The intervertebral substance of the human spine does not consist entirely of elastic ligament, dense in its texture at the circumference and becoming gradually softer towards the centre; but that the middle portion is composed of materials which render it very pliant, though not at all elastic, fitting it to keep the vertebræ at the proper distance from each other, so as to admit of the action of the lateral elastic ligaments.

'When this knowledge is applied to the treatment of the curvature of the spine, a complaint so commonly met with in young women, where strength does not bear the necessary proportion to the growth of the body, it will shew the great impropriety of overstretching the intervertebral ligaments, since in that state the central substance no longer supports the vertebræ, and the joints must lose their proper firmness, which will be attended with many disadvantages.'

The fluid contained in the cavity was examined by Mr. Brande, and was found most nearly to resemble animal mucus in its properties. It gave no indication of albumen or gelatine, until evaporated to about one half at a temperature not exceeding 220°, when it afforded small proportions of these substances.

A well executed engraving of the structure here described accompanies the paper.

Art. VII. *Lady Jane Grey*, a Tale, in two Books; with Miscellaneous Poems, in English and Latin. By Francis Hodgson, A. M. Fellow of King's College, Cambridge; and Author of a Translation of Juvenal. 8vo. pp. 350. price 9s. Mackinlay, 1809.

IT will probably be remembered, by some of our poetical readers, that Mr. Hodgson lately appeared, armed cap-a-pee, in the lists of translation, as the antagonist of its doughtiest hero, Mr. Gifford. In the encounter, he was generally acknowledged to be foiled, owing, perhaps, not so much to the want of very respectable powers in himself, as to the mighty arm and invincible skill of his adversary. He now presents himself as the rival, first, of no less considerable poets than Young and Rowe; and, secondly, of innumerable sonneteers and miscellany-mongers—ephemera, that flutter away their little hour in the sunshine of fair lady's eye, and are forgotten for ever. We must consider him in both these characters.

Of Rowe's 'Lady Jane Gray' Johnson only remarks, that it 'has sunk into oblivion;' and of Young's 'Force of Religion,' that 'it was never popular. It is written with elegance enough; but Jane is too heroic to be pitied.' Now, from the failure of these poets, we feel very much inclined to doubt the fitness of the subject for poetry. The truth of the story is too well known: all those airy shadows, those indistinct terrors, those fairy illusions, which accord so well with the uncertain moonlight of fiction, vanish, or appear ridiculous, when exhibited in the broad sunshine of history. This Mr. H. has made evident enough, in the only place in which he has introduced them. The tale is also too simple for epic narrative. The account of a female being called to a throne (ἐκλθ', αἰκοντι δε θυμῳ,) and being very soon expelled, without trouble, and almost without resistance, by the rightful owner, affords little room for interesting situations and pleasing surprizes, or for that artificial unity of plot, that mutual dependence of circumstances, which, though it may not contribute, perhaps, to the pleasures of imagination, affords the highest gratification to the judgement. Mr. H. too disclaims all 'critic arts,' all 'settled forms and pre-

cedents of verse.' Nothing remains to the story, then, but its pathos; and this, from the motto, as well as the declaration we have just mentioned, is what Mr. H. very probably meant us to look for in the present 'tale,' to which, (without considering whether pathos alone be sufficient to furnish out two cantos,) we now proceed.

The poem is made up of the most incongruous materials. First, we have the description of a hunt in Broadgate park; then, Ascham is introduced in dialogue with Jane, whom he finds reading Plato; this dialogue is interrupted by the return of the hunting-party, and another ensues between the dukes of Suffolk and Northumberland, on the forlorn state of England, in which the 'noble traitors' agree upon the marriage of Guildford and Jane; the marriage is solemnized; a 'favourite minstrel' sings the nuptial song, exhausted with which he

> 'fainted in his chair,
> Breathed out his tuneful soul, and died in rapture there;—'

a circumstance so ill imagined, as absolutely to shock the reader.

The second book opens with a conversation between the new-married pair; they are then summoned to the tower, and invested with royalty; Mary 'swells her warlike host,' and regains the sceptre;—after this, the poem proceeds regularly to the death of Jane.

Such is the design; to the execution we have two objections. The first is, the very superficial manner in which every thing is touched. Mr. H. hurries on so fast, as to give us no time to become acquainted either with the happiness of Jane at Broadgate, or with her misery in the tower. The consequence is, that we neither regret the one, nor are melted with the other. It would scarcely be possible, we think, to write a prose narrative of the same events conveying such indistinct ideas, and consequently exciting so little emotion.

Our second objection is, Mr. H.'s extreme fondness for declamation. 'A poet', as the father of criticism observes, 'should say as little in his own person as possible;' and he justly mentions it as one of Homer's excellences, 'that he knows where to appear himself*.' Now, if this condemns the poet's own narration, doubly must it condemn the poet's reflections on his narration. Surely nothing can so effectually recal the reader from Jane and Broadgate, as the sight of Mr. Hodgson at every corner. We can scarcely read three pages without meeting with some flimsy declamation on love, on marriage, on friendship, on religion, &c. &c.

* Οτι δε αγνοει ὁ δει ποιειν αυτον. Αυτον γαρ δει τον ποιητην ελαχιστα λεγειν. Arist. de Poet. § 24.

These objections apply to Mr. Hodgson's want of judgement: a more serious one must be founded on his want of genius. He seems to have written verse, till he has actually begnu ot fancy himself a poet; but scarcely could we point out a single instance, in which he exerts the magic power of poetry, over the understanding, the imagination, or the heart. The following couplet will shew how he manages, when he would shine in the pathetic; instead of suffusing *our* eyes, he wipes or seems to wipe his own.

'There on a heap of straw—(my childish eyes
Refuse their task)—the lovely ruin lies!'

If the poem be in any respect superior to the reams of common-place metre that encumber booksellers' shelves or college portfolios, it is in the article of versification. Mr. Hodgson, as we lately observed of Mr. Bland, has been sedulously copying the manner of Dryden and Pope, with a preference of the former. As far as Dryden's merit consists in the structure of his periods and the cadence of his verse, these gentlemen may claim a pretty large share of the humbling praise which is due to successful imitators; and their example may warn rising poets, (as rising painters are always warned) to *study* the admirable masters of the art, but not to *copy* them. With regard to Mr. Hodgson's versification, we must object to the very frequent recurrence of the Alexandrine, and also of the weak rhyme, and triplet. Of the Alexandrine he is so injudiciously fond, as to introduce it in elegiacs and sonnets.

Yet the piece undoubtedly has poetical passages. The first we shall quote has been already alluded to; it is certainly elegant, though much better suited to Melrose Abbey, whence it is taken, than to Broadgate-Hall, whither it is transferred.

'''Tis said, that night in Broadgate's silent hall,
Untouch'd, the banners wav'd upon the wall;
No breeze was felt, but some mysterious air
Of viewless spirit's voice was fancied there—
That voice arose on Jane's attentive ear,
And Dudley caught it with religious fear.
'Who shall explain the wonders of the dead
And whether from the cold insensate bed
Where rests the body in unbroken night,
Soars the free soul to realms of upper light?
Whether, releas'd from fetters of the tomb,
When friends on earth approach their sudden doom,
The warning shadow with prophetic breath
May not betray the secret march of death?' p. 23.

The next is a dream of Jane's while in the tower.

'One night she fancied that an angel guide
Led her to realms where holy saints reside.

The skies above with azure brightness glow,
Soft fleecy clouds the pavement press below;
(If pavement that might seem, where wide and far
It glitter'd, one consolidated star—)
Slow through the midst a river roll'd, and spread
Its glassy waters o'er that splendid bed;
On either bank the snow-white pillows hold
Reclining sages, venerably old;
The book of life upon each pillow lies,
And downward bend their meditative eyes.
'In a light bark, that floated with the stream,
(Thus wander'd on the strange, but soothing dream)
Jane and her angel guide the scene survey,
And mark the pensive tenants of the way.
'There Socrates repos'd, immortal sage,
Pausing in wonder on the holy page;
Saw full reveal'd what faintly he had guest,
Gloried in truth, and all his God confest
'There Plato blush'd, so fanciful to find
His earthly image of the heav'nly mind;
Beheld creation rise, at one command,
And without matter work th' Almighty hand.
Then eager turn'd, with rapture's glowing cheek,
The lovely Dreamer, and essay'd to speak;
But wonder bound her tongue—and hark! a strain
Of deep-ton'd praise pervades th' æthereal plain.
There the diviner few enjoy above
Their pride on earth, that harmony they love.
There, on the tranquil cloud of sacred ease,
Lies all alone thy form, Mæonides!
While thy loud harp, with high resounding strings,
Tunes adoration to the King of kings;
While, with prest lip, and wonder-speaking eye,
The list'ning Maro drinks thy melody;
Dares not himself the holy chorus swell,
But tastes a bliss that none but saints can tell;
Leaves the dim Sybil for Isaiah's glow,
And sees a Saviour rise in Pollio.
'But who shall paint Devotion's deeper gaze,
Who shall record her wider burst of praise,
Where round the blazing throne, that hangs so high
In the vast azure of yon arching sky,
Martyrs, and prophets, and apostles crowd,
Hymning their Maker in hosannahs loud?' pp. 37—39.

This poem is followed by 'a gentle Alterative prepared for the Reviewers!' It vents Mr. H.'s anger against the Edinburgh Reviewers, and his contempt for the British Critics Exasperated with the treatment of his Juvenal, and possibly with mortifying hints from his publisher that the world has confirmed the sentence of the critics, he pours forth 'the bursting torrent of his high disdain' with all that force and volubility

which we commonly observe among women of the lower order when they are angry. Here he writes with spirit enough. A Fury can bestow inspiration as well as a Muse; and, when Calliope would not listen to Mr. Hodgson's prayer, who can blame him for applying to Alecto? For our parts, we have escaped to admiration. Mr. H. only assures his readers 'of the actual existence of a certain book, called the Eclectic Review,' says it is 'a religious publication,' adds that its 'censure could only contribute to his fame,' and crowns all by affirming that he '*never saw it!*'

Of the critics, indeed, Mr. H. never seems to have said enough. He begins with them in the preface, spends above twenty pages on the alterative, then indites a Latin ode to the Edinburgh Reviewers, and after slight notices here and there, throughout the work, bids adieu to them for ever, ('as *individual* reptiles,') in the last poem. However, 'no future remark of their's will ever provoke a reply from' him; but 'quacks of every description, commentators, book-hunters, &c. &c. may find a place in some future Dunciad,' in which the critics 'may enjoy a share, should they survive long enough, in some comprehensive sentence.'—Poor Mr. Hodgson! *Ira furor brevis est:* and we cannot laugh at any kind of insanity.

Next follow eighty pages of 'Latin Poems, Original and Translated.' An Etonian is on his own ground here; yet we shall be daring enough to say, that we did expect something more classical than the present volume affords. We allude to such expressions as 'regnum Phantasiæ vagum,' 'in margine Thamesis crudele ludet Phantasiæ jubar,' 'præteritos flente dolore dies,' 'flammas despicit, Orce, tuas'; the reign of fancy, fancy sporting on the margin of Thames, grief weeping over the past, and a man despising hell-fire, are ideas of purely English extraction. Such a stanza as the following, Horace, we conceive, would have been at a loss to understand; and if Mr. H. should say that he was obliged to translate all he found in the poem he had undertaken, (Collins's 'In yonder grave, &c.') we can only answer, that, if he could not render it in intelligible Latin, he should *not* have undertaken it.

'Marginem nec Mnemosyne relinquet
Fert ut æstivas Thamesis corollas;
Sed jubens pendere reverberantem
Flumina remum,
'Sit tuæ,' dicet, 'requies favillæ!' p. 148.

Or what shall we say to this interjection—'O, mæstis acies edere guttis assuevit mea,' or to 'exantlans feroce voce sim,' or to such a conclusion for a heroic as 'vespere sero' or to the perpetual recurrence of the diminutive 'ocellus'

for *oculus*? We had noted some other petty faults, (and be it remembered, by-the-bye, that all faults, in school-exercises of Latin verse, especially if translations, must be petty;) but we stop, that we may have room to give our readers the following lines, which to us appear very elegant.

'SONG. *I know the blush of beauty's cheek.*

Novi rubentes quid valeant genæ,
Quantùmque possit virgineus pudor;
Quâ luce languescant ocelli,
Quâ timidi micet oris ardor.
Non me soluti mobilitas chori
Testem fefellit; nec digito lyra
Pulsata leni, dum sequaces
In numerum sonuere nervi.
Quam sæpe visæ totus inemori
Cogor puellæ! nec mihi gratior
Mors ulla, nec vitæ Sorores
Vellem alium posuisse finem.' p. 87.

The following epigram, on the late Mr. Daniel Lambert, clumsily laboured out of a bad pun, will shew how little Mr. Hodgson is qualified to set up for a wit.

'Si quæ magna tument, sublimia rite vocantur,
Mons velut, aut vasti fabrica mira Poli,
Vindicat egregiam Lambertus corpore famam,
Dicitur et vero nomine magnus homo.' p. 81.

Then come 'English Miscellanies,' and lastly 'English Translations.' Of the motley materials of these 200 pages, we cannot pretend to give our readers any particular account. Here are songs, sonnets, odes, elegies, epistles, ballads, rhapsodies, fragments, common places, epigrams, meditations, dreams, addresses: here are heroics, trochaics, anapæstics; here is grave and gay, lively and severe. Their merit is very unequal; *Sunt bona, &c.*

If Mr. Hodgson any where excels himself, it is in the *pensive*; but we cannot easily sympathize in the regrets or sorrows of a bard, who is sure to be found a page or two afterwards singing and dancing to the honour of Bacchus and Venus very much in the manner of a libertine. We will select one of his best pieces, styled 'the nnknown.' He had made use of the thought before, in 'Lucy'; this is, however, by far the better of the two. But the discovery that the whole mystery is 'but a dream', instantly dispels the feelings of wonder and awe which at first it seems calculated to excite; the catastrophe proves to be unmeaning, the sublimity extravagance, and the poem a riddle.

'In distant woods, where mighty rivers ran,
There liv'd a lonely melancholy man.

No human eye but mine did e'er intrude
On the sad being's holy solitude.
I saw him once—'twas many a year ago—
The chilly night came down in mist and snow:
Three hours with me that night he deign'd to pass—
I know not whence he came, nor what he was:
But full and horrible the tale he told.
My hair stood upright, and my blood ran cold.
'It chanc'd I journey'd—but the cause and time
And, most of all, the wonder-breeding clime,
A strange mysterious fear forbids me tell—
Yet cause, and time, and place, Oh! God! I know you well.
On a bleak ev'ning through those distant woods,
Wash'd by those dark unnavigable floods,
Alarm'd, at nightfall, to unwilling speed
I forc'd the weakness of my flagging steed.
Now wrapp'd in snow the misty forest lay,
And scarcely could I trace my fearful way;
When on a sudden at my side I saw.
With something more than reverential awe,
With mingled horror and respect a form,
Aged and pale, unshaken by the storm.
Wrapp'd in a cloak, his manly body past
Pow'rful and swift, disdainful of the blast.
But such a sadness in his hollow eye,
And in his mien such wild sublimity,
That rivetted I gaz'd, 'till drawing near
He gaz'd on me, and froze my soul with fear.
No word he spoke—but wav'd his hand around,
As if to chide the wind's unruly sound,
Then sunk in shiv'ring anguish on the ground.
I woke————————————'

pp. 196—198.

The fine passage in the first elegy of Tibullus, *Non ego divitias patrum*, &c. is rendered more happily perhaps than any thing else in the volume; but we have not room to quote it. We will only add two epigrams from Martial.

'You ask a hundred guests unknown to me,
And wonder, Richard, I refuse to come!
Richard—I go abroad for company,
For solitude I like to stay at home.' p. 329.

'Why ne'er to me,' the Laureat cries,
'Are Poet Paulo's verses sent?'
'For fear,' the tuneful rogue replies,
'You should return the compliment.' p. 331.

One word, in conclusion. We wish that Mr. H. would not play with the public,—that he would not present them with scraps and fragments, with translations which he knows to be cold indeed when compared with the original,' or which he confesses to be 'very poor,'—above all, that he would abstain

from notes.* He has given 'the critics leave to say what they please,' on his proposals for publishing another volume of these fritters: we earnestly beg him to keep them 'inter penetralia Vestæ';—unless he mean them as a visitation upon the reviewers, the only persons obliged to read them through.

Art. VIII. *The Principles of Life Assurance explained:* together with New Plans of Assurance and Annuities, adapted to the Prudent of all Classes, Civil and Military. By the Rock Life Assurance Company. 8vo. pp. 48. Price 1s. Mawman. 1809.

WE took up this pamphlet with expectations which have not been realized: we expected to have met with a concise treatise, but instead of that we find ourselves in possession of an *advertisement*, differing in this, however, from other advertisements, that the *reader* instead of the advertiser pays for it. The *name* of the society or company which have authorised this publication is much in its favour; and the principles on which it is established are at least equal, though in no respect that we have yet discovered superior, to those of several other companies instituted for similar purposes. The concerns of the Rock company are now, in a scientific view, under the management of Mr. William Frend; a gentleman, who about a dozen years ago endeavoured to distinguish himself as a *reforming* Algebraist, by depriving the system of modern analysis of half its symmetry and beauty, and *more* than half its utility. Notwithstanding this, however, we believe that if he would check his strange propensity to skim over the surface of a thousand subjects, and would direct the whole force of his mind to that of annuities and assurances, he would be quite able to manage the concerns of the Rock with propriety and safety. The pamphlet before us we consider as the production of Mr. Frend, and as such we shall proceed to examine it.

First, then, the title of the tract is a perfect *misnomer*. The pamphlet contains *no explanation* of the principles of Life Assurance: it does not, as far as we can find, give any explanation of the *fundamental* principle, or even advert to it, except by implication. It is true, there are some de-

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* One of these notes however, may afford the reader acceptable information: 'The Day of Judgment, a Seatonian prize-poem, was written by Roberts, and fathered by Glynn, of King's College, Cambridge, because the real author was too old to be a candidate, in order to extort from Bally (a third Kingsman, and one of the best modern Latinists) his revenue, as he was used facetiously to term this prize.' p. 330.

of the *advantages* of annuities, assurances, and survivor-
ps; and here the actuary takes care to be full and dif-
e in what almost every one knows, (as at pp. 16, 17.)
very deficient and obscure in what is not so common,
at p. 37.)

econdly, the three tables here given are neither of them
, the explanations accompanying them are very scanty,
the tables themselves are founded upon demonstrably erro-
s principles. It is taken for granted in their construction,
a chance is annual which is in fact momentary; and as
h discount of money is allowed on the value of the
ce in the *first* moment of the year, as in the *last* mo-
t of it. This error, it has been shewn by the Rev. J.
ins,* makes the result on the assurance upon a single
deficient by a 67th part of the whole; and the effect
e error varies with the number of lives. Another error
ccasioned by taking the expectation of life from the
hampton tables; for it is now *well* known by every per-
at all conversant in these inquiries, that the expectation
general somewhat *longer* than is shewn by these tables.
we have error upon error; all of which it is true are
red, with regard to the *offices*, by their allowing the as-
only *three per cent.* for his money: but the present
petition ought surely to lead some of them to a careful
rence to first principles, and the consequent produc-
of new and more correct tables, such as might deserve
obtain the favour of the public.

e shall now offer a very few remarks upon some par-
ar passages, which we think either erroneous, illiberal,
lculated to mislead, and shall then leave the pamphlet
s fate.

r. Frend says, 'a society that should consider these
sits as profits, and proceed to make dividends thereon,
in process of time, and that at no very distant period,
to ruin.' Very true, if a society so sapiently managed
in existence. But, as far as we can learn, there is none:
e are therefore confident that many of the respectable
whose names we see as directors, trustees, and auditors
e Rock Society, must be indignant to find such illiberal
nations, against *nameless* societies, published as if with
sanction.

r author proceeds to state it as 'a question of serious
itude, whether a Fire Insurance and Life Insurance
should be established on the same capital stock, and
ged by the same company.' This 'question of serious

* Leybourn's Mathematical Repository, No. VII. Art. 11. N S.

magnitude' may be readily answered by an appeal to fact. To mention only one instance, the Royal Exchange assurance office, incorporated in 1719, assures lives, as well as against fire; and no person, we are confident, ever threw out a doubt as to the safety of that society, and its competency to discharge both kinds of business.

A few pages farther on, when our author is dilating upon the benefits of assuring at the Rock office, he says, 'Non-proprietors, who make an assurance with this company, are *in every respect treated as Proprietors*; they pay exactly the same premiums according to their ages, and *participate in the same advantages*, which are founded on the payment of the premiums.' If all this be true, though we do not understand how it can be, we should be glad to learn what *particular* inducements there can be to become a *proprietor* in the Rock company.

'In this place (says the writer) it may be seasonable to remark, that persons purchasing an annuity from government, who may afterwards be desirous of leaving a part of their capital behind them, may at this office make an assurance for such part thereof. Thus a father or mother left with a young family, may be desirous of sinking their capital to enlarge their income, by which they may educate their children. But out of this increased income, they may devote a part to a life assurance, that would secure a sum to be paid at their death. We recommend this to the attention of those who may have converted their three per cents. into life annuities. For at this office, by the periodical appropriation of profits, they may be considerable gainers by the transaction.'

In addition to this it may be right to say, that in some of the other offices, the Globe Assurance Office for example, five per cent, i. e. the twentieth part, is deducted from the whole amount of the annual premium every year and given to the party making the insurance under the denomination of commission; and this reduction in the advanced ages of life, brings the premiums about as low as they had been computed originally from Price's Northampton table of the probable duration of life, and the person insuring had five per cent. interest allowed him for his money In the Rock, however, it does not appear that such allowance is made, but the person insuring is allowed only three per cent. for his money, and the uncertain hope of an increase to the sum insured, after seven, fourteen or twenty-one years, and so on; yet, viewing this in the most flattering light, it is certain that no benefit whatever can be derived from it during the life of the person insured. Hence the reader may easily perceive in favour of which offices the advantage lies.

We are next informed that 'the Rock Life Assurance ffice proposes to grant *annuities to commence at a remote riod*, and to continue from that time for the whole life the annuitant:' but this is not, as a reader of the pamph- would suppose, peculiar to the Rock. Annuities to com- ence at an assigned subsequent period, and to continue her for a term of years, or for the whole remainder of life, were granted by other companies long before the tablishment of the Rock.

When descanting on the advantages of '*remote* annuities' officers of the army and navy, Mr. Frend says, '*The ole* of course depends upon this *calculation*,—what is the ration of life in the military profession, by the casualties war and climate, added to the usual course of mortality'? his is one among the numerous instances of loose, indefinite iting, which abound in this little pamphlet. What the uary here mentions is not a calculation, but a *question*; d a question, unfortunately, which cannot be completely ved by 'calculation.' Nor does '*the whole* depend' upon particulars to which Mr. Frend adverts: is there to be interest allowed the purchaser for his ready money? In equally confused manner our author often casts into his ntal crucible many incongruous particulars, so as to pro- ce amalgamated nonsense. 'We cannot (he says, p. 26.) e a table of rates at which these annuities may be se- ed; because the table must be adapted to the different tions, climates, and ranks. *It* is an agreement of a num- of brave men to form a fund,' &c. Is the table of rates *agreement* of brave men? Or, what is the one? Or, what he other? Mr. Frend does not inform us; but with his al felicity and precision, wanders on, talks about annui- , then seems to lose himself, and rambles about a policy assurance. Does this gentleman, who has told us 'the *bability* is that' Maclaurin and other eminent algebraists ve never thought accurately upon the subject' of ana- s, cogitate so clearly upon that of life annuities as not ee that there is a considerable difference between a 'po- of assurance' and an 'annuity deed?' But we cannot ll upon these and similar instances of want of perspi- y. The reader who wishes to treat himself with more, find Mr. Frend at p. 5 affirming that 'there is no chance uncertainty in a case,' and immediately after saying '*hap-* when it may:' and at p. 37. he will observe him to use term 'survivor' so as to confound two obviously distinct ies of life insurance.

n one point, however, the actuary is tolerably clear; we

mean that of *Rates:* yet we do not always approve this p of the pamphlet. In *general*, the charges are the same at other offices; but in a few cases they are greater. Th 'Every person making an assurance with the Rock compa on the whole of life, pays down five shillings in the na of *entrance money*.' No such charge as this is made by other large and respectable offices. Again, 'if the assura is to be made to secure one of two parties a sum on death of the other, then the appearance of both parties required, or the payment of *one per cent.* for non-appeara will be expected.' This is an exorbitant charge: the n extra payment in the other offices is 15s. per cent on sums insured, charged on the first payment only. With th exceptions, and one we have specified in an earlier par this article, we think the charges of the Rock Company the same as those of most other offices; we therefore it success. We rejoice in the establishment of such insti tions; for it is only by the fair competition of different cieties that the business of life assurances can become perly understood, and their importance duly appreciated the country at large. If, as Mr. Frend informs us, 'th are not perhaps in all the united kingdom 30,000 per assured against the consequence to their posterity of own premature death,' there still remains much to be d and we are, therefore, solicitous to see the principles advantages of life assurance popularly yet perspicuously cidated in small compass. The present attempt, we t has failed; and we shall be glad, if the exposure, made of some of the author's errors and inadverte should induce him to revise the subject *with care*, to in tigate it *to the bottom*, and then to produce a perform that may not be dishonourable to a former graduate tutor in the learned university of Cambridge.

Art. IX. *Primitiæ; or Essays and Poems on various Subjects gious, moral, and entertaining.* By Connop Thirlwall, eleven of Age. Dedicated, by Permission, to the Lord Bishop of more. Second Edition. The Preface by his Father, the Rev. mas Thirlwall, M. A. Minister of Tavistock Chapel, Broad Long Acre; Lecturer of St. Dunstan's, Stepney; and Cha the Lord Bishop of Dromore. 8vo. pp. xii. 230. Price 6s. 1809.

IN the preface with which Mr. Thirlwall furnishes hi it is stated that

'At a very *early* period he read English so well, that he wa Latin at three years of age, and at four read Greek with an e fluency which astonished all who heard him. From that time

continued to improve himself in the knowledge of the Greek, Latin, French, and English languages His talent for composition appeared at the age of seven, from an accidental circumstance. His mother, in my absence, desired his elder brother to write his thoughts upon a subject for his improvement, when the young author took it into his head to ask her permission to take also the pen in hand. His request was complied with of course, without the most remote idea he could write an intelligible sentence, when in a short time he composed that which is first printed, 'On the Uncertainty of Life.' From that time he was encouraged to cultivate a talent, of which he gave so flattering a promise, and generally on a Sunday chose a subject from scripture. The following Essays are selected from these lucubrations. His taste for poetry was not discovered till a later period.' pp. vi, viii.

As to his motive for exposing 'to the public eye the literary performances of a child,' Mr. T. says,

'I trust he will be stimulated to the improvement of his talents and the pursuit of learning, and will consider this public record of his religious principles, "a swift witness" against the future violation of them.' p. v.

Here we cordially agree with the fond father; he has led his young Hannibal to the altar of virtue and the muses, he has administered the oath of allegiance, and we hope that 'non ego perfidum Dixi sacramentum,' may be the feeling of our hero's latest age.

At the same time, having once received the encouraging smile of public favour upon his juvenile efforts, let him retire to solitude and labour; let him remember that he who would instruct, must first be instructed; that he who would please, must gather and lay up materials for pleasing. Let him look through nature for himself; let him ransack whatever there is of curious or valuable in arts, sciences, manufactures; let him study, let him systematize, always bearing in mind that nothing is useless to the true poet,—he possesses the philosopher's stone, and can turn every thing to gold. Having thus provided himself with the *res*, let the *verba* be his next consideration. Let him study the expression of genuine nature, let him study its copy in the golden volumes of Greece and Rome, and, above all, in the classic authors of his own country. During this, let him learn (what so many have been mistaken in,) his own powers, 'quid valeant humeri, quid ferre recusent.' Thus, armed at all points, and fortified by the admiration of solid excellence against the splendid errors of some more modern schools, let him write, and, having 'kept his piece nine years,' let him publish. We will venture to predict, that he will not seem as lost the intervening period.

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more than two short extracts. They are both from piece written at the age of eleven. If our readers regard them a favourably as ourselves, they will hail them as the blossom of a tree, which, if properly cultivated, may hereafter pro duce 'fruits worthy' of 'paradise.'

'It must be exrremely obvious to every intelligent mind, that the ea liest impressions are the most durable. The docile mind of youth m be compared to melted wax, which in that state may be reduced to a form or shape at pleasure; and with equal justice, may the stubbo age of maturity be compared to it when unmelted, when, in attempti to bend, it will break into a still more shapeless mass. And indeed, a cording to the regulation of worldly wisdom, this mode of early educ tion is universally adopted: the parent who wishes his son to become eminent mechanic, trains him up from his earliest youth to that particul occupation in which he intends him to engage, or if he desires to him excel in any profession, which calls forth the exertion of his men faculties, does he not in his childhood, endeavour to render him suitab for the employment of his riper years? And surely, if this system early education is found necessary in the opinion of the world, the p dent father will carefully adopt it, in regard to the spiritual interests his son. It is true, that some examples may be adduced from anci history, to shew, that from the best education the worst of fruits h been derived. It is true, that in spite of the precepts of Seneca, detestable Nero lived to be the disgrace and torment of the Rom empire, and that the vices and cruelties of Commodus ill repaid the c of the virtuous Antoninus. But these instances are rarely to be met w nor must they be considered as incentives to neglect the education of offspring, or to leave them to their own dispositions and inclinatio if such is the case, the parent will bitterly repent of it; soon ind but perhaps too late for amendment. pp. 137—139.

'Still, though the critic, with disdainful frown,
Cast, half perus'd, my little volume down;
Nor with one disapproving stroke shall deign
To shew how lifeless and absurd my strain.
Still there are some in whom, if I judge right,
My youthful labours will produce delight;
Though dull each thought, and languid ev'ry lay,
With partial eye will some my lines survey.
The torch of friendship shall supply the place
Of warmth poetic and poetic grace;
Friendship shall fondly call my numbers sweet,
My thoughts sublime, my work in all complete:
Such be my lot, however dull my lays,
I care not, if the voice of friendship praise;
Still can I not give up my muse entire,
Still to poetic warmth in vain aspire,
On fam'd Parnassus' ever blooming brow,
Still must I seek the various flow'rs that grow,
Still shall I seek Apollo's shelt'ring ray,
To cheer my spirits and inspire my lay.' pp. 227, 228.

Art. X. *Sermons on various Subjects*, by the late Rev. Thomas Strange, Kilsby, Northamptonshire. With some Memoirs of his Life. 8vo. pp. xliv. 341. Price 5s. bds. Williams and Co.

THESE Sermons, we are informed, were originally composed, rather as notes to assist the private meditations of the author, than as discourses intended to meet the public eye. This we should certainly have concluded from the gross inaccuracies with which they abound, though no such intimation had been given by the editors of the work. They discover a mind devoted to the cause of pure and undefiled religion, anxious to recommend the doctrines of unadulterated truth, and concerned to apply that truth to the reformation of the heart and conduct. But they discover little more: the reader would be greatly disappointed, should he sit down to peruse them in hopes of meeting either with original trains of thought, or with forcible appeals to reason, conscience, and feeling. We should have expected that, during the six years the author studied under Dr. Doddridge, he would have made greater proficiency in the art of communicating his ideas, than is indicated by this volume. The very first rule which the Doctor gives concerning the arrangement of the thoughts, is violated times out of number:—"Let the heads be distinct, not only in words, but in meaning; study to express them clearly, that the distinctions may evidently appear; when it is otherwise, the sermon cannot be understood, well received, or tolerably remembered; and the preacher himself, it will be supposed, has not fully understood his subject." This supposition frequently arose in our minds, while reading the sermons of Mr. Strange, notwithstanding the favourable opinion expressed by his friends, the editors. Had we room for particular enumeration, we could specify at least five instances, in which two heads of a sermon contain precisely the same thought, though differently expressed. To this inaccuracy of division, we impute two other faults in these discourses; obscurity, and sameness of illustration. The subjects are as follows.—A minister's concern for his people. The exceeding sinfulness of sin. The nature and necessity of repentance. Continuance in the love of Christ. The evil of deception. Growth in the knowledge of Christ. The evil of encouraging sin in others. The spirit of true religion. The connexion between faith and salvation. The holiness of God. On the fear of God. God, the believer's portion. Benefit of sanctified afflictions. Connexion between faith and holiness. The necessity of forsaking sin. The portion of unbelievers. The evil of formality. Having part in the blessings of the Gospel.

From the memoir prefixed to these Sermons, we learn, that the author was for thirty-three years pastor of a congregation at Kilsby, Northamptonshire, where he died in 1784, at the age of sixty. He was afflicted with a defect of sight, nearly amounting to blindness; and had a disagreeable, uncouth peculiarity of gesture and elocution, which precluded his attaining even so much popularity as he deserved. He was nevertheless an useful minister, and at one part of his life an esteemed instructor of youth. Our readers will be gratified with an account of his views at the close of life.

'To three of his neighbouring brethren who accidentally met at his house, he said in the course of their short conversation with him, "I have always valued and preached the doctrines of grace; but nothing gives me so much concern, on the review of my ministry, as that I have not more insisted upon, and pressed, the fruits of grace." And when all united in their cordial testimony to the practical strain of his preaching, he added, "As death and eternity draw nigh, I see more than ever I did before, the infinite importance of those fruits, and the comparative insignificance of all opinions without them." At the same time he was not at all doubtful or indifferent about the peculiar doctrines he espoused. As to the person of Christ in particular, he left in his charge, to the Rev. Mr Belsham, to assure his flock in his funeral sermon, (and in words taken down as he delivered them) "that he died in the firm belief, that Jesus Christ was the true and proper Son of God; in whom dwelleth all the fulness of the godhead bodily: a doctrine," he added, "which I firmly believe, but do not attempt to explain."

'During the last fortnight of his life, most of which he spent with his elder son at Kettering, he often said to friends who desired to know his sentiments and views in the near prospect of death, "I wish to die a broken-hearted sinner, renouncing every thing of my own, and depending entirely for future happiness, on the free grace of God, through the atonement and righteousness of Christ."' pp. xli, xlii.

Mr. S. was famed for his knowledge of the weather, acquired by his observations while employed in early life as his father's shepherd. His theory was, that

'There are in our atmosphere several currents, [of wind] one above another, in various directions. Three of these currents may often be discerned at the same instant, by the motion of the clouds in each. One on the surface of the earth, in which the vapours recently exhaled are often condensed in heavy looking clouds, which sometimes fall plentifully (even when the barometer is very high) in those small drops commonly called a Scotch mist. These clouds always move with the wind under the others, and much faster. Immediately above this current is another directly across it, and generally from the right, though sometimes from the opposite point. This is the region from whence sober rain descend; so that in showery weather we are to expect those clouds, and that clear sky, which appear above the horizon exactly to the right hand of the wind, though now and then to the left; thunder clouds excepted, which move by electrical attraction or repulsion in all directions. Over this is the third current, generally parallel to the lower, in which the fleecy clouds float which adorn the sky, but never incommode either the husbandman or traveller.'

Art. XI. *Jude's Question Discussed*; or, The distinguishing Manifestations of Christ to his sincerely enquiring Disciples, considered. A Sermon preached at the Rev. James Dore's Meeting House, Maze Pond, Southwark. By W. Kingsbury, M. A. Printed at the Request of the Minister and the People. 8vo. pp. 44. Price 1s. 6d. Black, Parry, and Co. 1809.

THE publication of the sermon before us is such a proof of the mutual esteem and liberality of good men of different denominations, and of their cordial co-operation in the diffusion of important truths, as it gives us sincere pleasure to record. Mr. Kingsbury has been for many years the minister of a congregation of Independent Pedobaptists at Southampton; and the church at Maze Pond, over which Mr. Dore has the pastoral charge, is of the Particular Baptist persuasion. Yet, notwithstanding this marked difference of opinion on an important topic, the ministerial labours of Mr. Kingsbury have been gratefully received by the congregation at Maze Pond: and the sermon before us is an evidence that, whatever others may do, *these* 'Christians love one another.'

The subject chosen by Mr. Kingsbury is the inquiry of Jude (John xiv. 22.) 'Lord, how is it that thou wilt manifest thyself unto us, and not unto the world?' The preacher, after sketching the character of the querist, and touching briefly upon his inquisitive disposition, proceeds to the question itself. Here he shews who are the people intended by 'the world,' remarks that even unto them 'some sort of manifestation of Christ is made,' and then inquires particularly into that 'especial manifestation which Jesus promises to his true disciples.' Under this third division, he describes the specific nature of this manifestation: its author; the means employed; the effects, such as elevated thoughts of Christ, confidence in him, reverential affections towards him, and assimilation to him; and lastly, the occasions and seasons, as under pungent convictions of sin, in time of persecution, of affliction, of devotional retirement, on the Lord's day, and at the close of life. The illustration of these topics leads to a suitable address to different classes of hearers, with which the sermon concludes.

This publication is not distinguished for any display of critical acumen, literary attainments, or flashes of genius; but, for what is of infinitely more value in a sermon,—for its plain good sense, and deep piety,—for its knowledge of the vicissitudes in the Christian life,—and for its tendency to touch, to soften, or to soothe the heart, to fix the mind upon the right objects, and to raise the conduct to its proper standard.—One quotation is all that our limits will admit.

'We are very apt, insensibly to ourselves, to catch the sentiments and spirit, and to imitate the manners and ways, of the friend whom we highly esteem and love as a model of wisdom and excellence, and with whom we frequently associate. The manifestations which Jesus grants unto his people, must and will have, in a measure, the same effect on them. 'We all, with open face, beholding as in a glass the glory of the Lord, are changed into the same image from glory to glory, as by the Spirit of the Lord.'* If we love, honour, and maintain an habitual intercourse

* 2 Cor. iii. 18.

with him: if he dwell with us, and we with him, the vile tempers, the mischievous and abominable conversation, society, and practices, which a holy Jesus abhorred, we shall abhor and avoid. 'Do not I hate them, O Lord, that hate thee? and am I not grieved with them that rise up against thee? I hate them with perfect hatred, I count them my enemies.'* And that lovely temper, that 'meekness and lowliness of heart,' which Jesus calls 'his yoke, which is easy; his burden, which is light;' we shall take upon us. That purity, obedience, submission to his heavenly Father, that zeal for God's glory, that spirituality and heavenliness of which he was such a striking model, shall we not copy, if we are much with him? If we behold him, contemplate him, converse with him, shall we not grow more and more like him? Brethren, let us not be deceived. We live in times of much religious infatuation and delusion: there are many who say, 'lo, here is Christ, and lo, there.' Many, who profess to be the only people who have had Christ manifested unto them, and to proscribe all besides themselves as deceivers; and many, it is to be feared, that pique themselves on the extraordinary spiritual discoveries made to *them*. But let us inquire what, that is Christ-like, they have about them. It is by their fruits, and not by their pretensions, that we are to know them. If they talk vauntingly of communion with God while they continue to live in sin, in impurity, in excess, in falsehood, deceit, hatred, malice, evil speaking, bitterness, and wrath, they assuredly deceive themselves, and the truth is not in them. Trust, then, (again I warn you) no impressions, however strong; no imaginations, however lively; no joys, no supposed manifestations, as genuine, however sweet, but those which humble self-boasting pride, which mortify the old man, which purify the heart, which produce tenderness of conscience, and love, peaceableness, benevolence, kindness, patience, and holy serenity. These are some of the discriminating marks by which we may know genuine special manifestations of Christ, from those partial, delusive, or pretended discoveries which the unregenerate world may obtain.' pp. 23—25

We were sorry to meet with three or four such antiquated, awkward words, as *unacquaintedness*, *prayerfully*, *obedientially*, &c. and an inelegant change of pronoun from *you* to *thy*: but these are slight blemishes, that detract nothing from the real merit of the sermon. It exhibits to great advantage the dove like meekness of the Christian, and the persuasive manly ardour of the Pastor. If the general strain of Mr. Kingsbury's preaching be conformable to this specimen, the church over which he has so long presided must undoubtedly be remarkable for a spirit of harmony and affection, or chargeable with a strange insensibility, piously grateful for the blessing they have enjoyed, or eminently unworthy of it.

Art. XII, *The Christian Pastor;* a Poem, in three Books. foolscap 8vo. pp. 150. Price 5s. Burditt, Maxwell and Co. Conder. 1809.

IF the poetry of this writer will not recommend his sentiments as effectually as we could wish, the sentiment will at least recommend the poetry. We agree with him that 'some passages are too prosaic, some lines rugged and inharmonious, and that in some instances the established rules of criticism are violated.' But we also participate

* Psalm cxxxix. 21, 22.

'hope', which he pleads 'as an excuse for his temerity,' that 'the blication is calculated to do some good.' Its general tendency we hly approve; it inculcates just principles, without bigotry; zeal, hout enthusiasm; and the necessity of religion with the advantages literature. We must content ourselves with one extract, which will e a favourable impression of the writer's talents.

'All nature yields him pleasure; for he sees
A God in all. At the still evening hour,
When the grey twilight spreads her sober vest,
Or when the kindling lamps of heaven start forth
In quick succession, gleaming through the shades,
He loves to converse with the works of God,
In silent extacy; nor envies he
The throngs which haunt the public promenade;
The glittering blaze of crowded spectacles
He covets not; nor seeks his happiness
From midnight scenes of riotous display.' p. 47.

The First Book describes the pastoral character and office; the Sed condemns false teachers and antichristian pastors, one of whom is roduced under the name of Eugenio; the Third Book celebrates the ours and reward of the '*Christian* pastor,' under the name of Asio.

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rt. XIII. *Letters from an Irish Student in England to his Father in Ireland.* 2 vols. 12mo. pp. 660. Price 12s. Cradock and Joy. 1809.

READER but moderately acquainted with the tricks of modern book-makers, would soon begin to doubt the genuineness of these 'Let-', though the name of Sir Richard Phillips is *not* on the title-page: it is well known to be one of these tricks, for the real proprietor to rrow the name of a friendly house, on the same principle as he buys t of a popular writer. The preface contains a remark, obviously inded to account for various signs of *manufacture* which would otherse create suspicion in the mind of ignorance or credulity itself. And due time we come to passages of the following kind, which determe both the nature and origin of the book to little less than a maematical certainty.

'I am indebted to a barrister, a friend of mine, for an introduction, a ort time since, to *Mr. Sheriff Phillips*, (!) one of the *sheriffs* of this , and also one of its *first booksellers;* whose *upright zeal* in the exeion of his office, *entitle* him to my warmest eulogiums. In conseence of the obliging invitation of the sheriff, Col. B—— and I had an portunity of seeing most of the metropolitan prisons; and to his hor, I may add, in a state of evident improvement.' Vol. I. p. 162, 3.

'These and many other points were forcibly and very earnestly urged us by the *Sheriff*, whilst we were passing through these wards, and seemed to expect that he should succeed in removing many of the ses of which he complained.' p. 177.

'Since Mr. Sheriff, now *Sir Richard* Phillips, has left his office, he s detailed these abuses, and stated the means of their removal, in a

Letter to his Constituents, the Livery of London, a work, which, it *hoped*, will long be received by all sheriffs in Ireland, as well as in Great Britain, as a manual of their duties in this very important office.' p. 178.

'These ideas are corroborated by a spirited memorial to the Secretary of State, drawn up by *Sir Richard Phillips*, and printed in his *very able work* on the Duties of Sheriff. Page 110.' p. 182.

'Amongst the *many humane exertions* which *Mr. Sheriff Phillips* has made on behalf of the miserable wretches confined in this prison,' &c. p. 185.

'*Sir Richard Phillips* has forcibly pointed out the *legal* and *constitutional* abuses of this prison,* in a protest, which, as sheriff of Middlesex, he presented to the king's commissioners, recently appointed to inquire and report upon them. Duties of Sheriff, page 48.' p. 191.

'Amongst the most enterprising booksellers of the day, I am informed that *Mr. Sheriff Phillips takes the lead!*' Vol. II. p. 20.

'† I have been assisted in this letter by the article WEAVING, in the British Encyclopedia, as I learn, written from the preface, by the *Rev. Joseph Nightingale!!*' Vol. I. p. 271.

'If you wish to be informed of the origin and progress of the Methodists, their bickerings, persecutions,' &c. 'and their intolerant spirit, I refer you to the *Rev. Joseph Nightingale's* Portraiture of Methodism, a work which, *to important information, unites agreeable entertainment*, and which, *with moderation, unfolds the folly* and *wickedness of the sect!*' p. 108.

The reader will begin to wonder why we should have disgusted him with such exposures as these; and will perhaps think any further proof needless, of the depravity and ignorance evinced in this incomparable catchpenny. Why need we tell him what the writer says of the missionaries and native Christians in Bengal?

'The manner in which these missionaries proceed in their attempts at proselytism is by alluring the *native*, not so much with the superior attractions of the Christian religion, properly developed to *them*, as by the more seductive offer of four annas, equal to eight pence English, per day, as the price of becoming a Christian.' p. 39.

Why need we add, that he speaks with admiration of the Mansion-house,—that he is enchanted with the '*exterior*' of St. Stephen's, Walbrook, and 'the singularity and beauty of its *spire!*'—that he talks of 'the heaviest visitation with which the Almighty can *inflict* his creatures' —that he informs us duelling originated in the year 1527!—that he says he has 'some little pretensions to *taste*, and an enthusiastic *love* of *it!*'—that he 'cannot but lament, and even *to feel* no little surprise that,' &c.—that he criticises Mr. '*Fuzeli*', and declares '*Canovre*, (probably meaning Canova) the greatest statuary now existing,'—that he thinks Mr. Whitbread 'possesses an *uncommon* clear and comprehensive *mind, which he conveys* in bold and nervous language,' and that he believes him to be '*incorruptable*,' &c. &c. Our reason for taking the trouble is plainly this;—The Eclectic Review, on certain memorable occasions, has detected fraud, ridiculed dulness, and branded impiety

* Cold-bath Fields.

† This sentence is quoted faithfully.

is therefore mentioned by the worthy contrivers of the 'Letters' now
fore us, in the following emphatic terms, which we quote both to
muse our readers, and justify ourselves.

'This *detestable* publication is entirely under the influence of a num-
er of violent, pedantic, hot-brained fanatics, attached to Methodism.' !!!
ol. II. p. 26.

It may well be imagined the *first* effect of this 'retort courteous'
as a violent fit of laughter; but the *next* effect, we are sorry to say,
truly distressing. Being made parties, as well as judges, in this cause,
has unhappily become necessary for us not only to express our opi-
on, but to state some of the facts on which it is founded. We
ould otherwise have troubled our readers with only a very few words,
aving such as might neglect the warning, to the self-inflicted punish-
ent of buying and reading the book. We might then have contented
rselves with representing it, as—a shameless imposition, of the mean-
t quality; a collection of that miserable common-place on public cha-
cters and incidents, on the drama, and the arts, which may be called
wn-gossip, and heard in every shop; a farrago of newspaper anecdotes,
readbare jests, and pillage from such books as the Picture of Lon-
n, and the British Museum Synopsis; with scarcely any thing ori-
nal but the impudent *puffing*, the dirty malice, the glaring falshoods,
e rancour against pure morality and sound religion, the indelicate
scriptions, and the matchless absurdities committed in retailing the
rious articles of trash and plunder; in short,—a *trick* worthy of *Sir*
chard Phillips to *contrive*, and a *job* fit for the *Rev. Joseph Nightin-*
e to *perform*.

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t. XIV. *A Grammar of Geometry*; containing an easy Exhibition
f the Practice of that Art; serving as an Introduction to Euclid
nd to the practical Mathematics. By J. Smith, L.L.D. 16mo.
pp. viii. 80. Price 3s. 6d. bound. Phillips. 1809.

'THE first suggestions of curiosity in the human mind,' says J.
Smith, L.L.D. 'are, how long? how high? how big? The
lving of such questions is the peculiar province of practical Geometry.'
nformably with this notion, we shall lay before the curious the prac-
l geometry of the Doctor's book. Its length is six inches and one-
; its height, when placed flat upon our table, sixty-five hundredths
an inch, (we express the dimensions in words rather than by figures,
the advantage of those *practical geometers* who have not learnt de-
al arithmetic), its breadth three inches and nine-tenths; and its *big-*
one hundred and twenty-four pages, including *only* thirty-six pages
advertisements of books manufactured, published, and sold by Sir
chard Phillips and well qualified assistants. We are not quite sure
ether *colour* is, in Dr. Smith's opinion, a geometrical quality; if we
, we might gratify 'the suggestions of curiosity' in that way, by
ng that the cover of the book is red. This is the most important
rmation we have to communicate; except we add, that the diagrams
neat, and the book nicely spaced out, so as often to bring, with a
management, from eight to twelve lines into a page.

As to the contents of the work, we may say briefly, that there are

thirty-eight geometrical problems; eight examples in plane trigonometry, and forty-four questions for exercise. The precepts are very concise and sometimes erroneous. Some of the examples are far too difficult for an elementary book; and depend upon principles not explained in this Grammar. Indeed, the grand fault of the book is, that it has no luminous explanation of processes, nor a single demonstration. For our own parts, we are modest enough to think, that, when we learn nothing from a book, common readers will not learn much: and we may safely say that all we have learnt from Dr. Smith's Grammar of Geometry is, that Sir Isaac Newton wrote his various performances in *English*, and *that they were translated into Latin by Dr. Clarke.* For this valuable piece of information, the public will doubtless feel much obliged to the present author; and will expect to be told next, that Lord Bacon's *Novum Organum* was translated into Latin by Julius Cæsar.

Art. XV. *Another Guess at Junius, and a Dialogue.* 8vo. pp. 10[illegible] Price 2s. 6d. Hookham. 1809.

IN the preface of this pamphlet, the writer concisely, but satisfactorily states the evidence on which it appears, that neither Grattan, Hamilton, Lord G. Sackville, Dunning, Adair, Major-General [illegible] Boyd, Wilkes, Lord Shelburne, nor any inferior person who has ever been suspected, could be the writer of Junius's letters.

His 'guess' attaches to no less a person than the illustrious *Earl of Chatham*; and he brings forward a variety of evidence which, to say the least, compels us to regard his conjecture as the most probable. The praise bestowed on the great statesman himself, in these incomparable writings, is an objection of no weight, when we consider the arrogance of his disposition, and his certainty of concealment; it might even be introduced as a blind, for anonymous compliments to a man who deserves them will never be attributed to himself. On a subject of so much literary interest, we must be allowed to state the leading points of evidence.—The first arises from the determination that his secret should die with him. Any man living, except Lord Chatham, might have been proud to confess the authorship of Junius, and desirous to reveal himself, if to no other person, yet at least to the statesman whose politics he had defended, whose talents he had extolled, whose enemies he had stigmatized. The greatest minister of his time, however, could gain nothing by the reputation of anonymous and ferocious invectives directed against persons of the highest rank, whose enmity would blight for ever his hopes of returning to power—and insulting even the person of the sovereign, from whose hands he was receiving a pension. The time of publication, the complexion of the politics, the familiarity with the scandal of high life and secret court history, the animosity against the party and country of Lord Bute, the indignant reprobation of 'his opponents, but more especially of those who deserted his party—the endeavours to keep measures with the king, so long as there remained any hopes of his being recalled to office—the bitterness and acrimony of his censures, even against majesty, when those hopes were vanished—the instigating the people to petition for a new parliament, as the existing House of Commons was so decided for the ministry—the con-

rent exertions of the writer and the statesman to gain popularity with the citizens of London—the dislike, approaching to envy, yet assuming the form of contempt, manifested against his competitors, Wilkes and Horne Tooke—but above all, the blasting invective, the fulminating denunciation directed against not a single administration, but every one in which Lord Chatham was not included, point out the imperious and indignant author. Such forcible, impetuous, and inflamed philippics, teeming at once with anger and disdain, breathing the very soul of a writer more than commonly interested in their success, could not have been the work of a vulgar partizan; they bear the stamp of a great and commanding genius, haughty, dogmatic, and overbearing. They are the "thoughts that breathe, and words that burn," of a popular orator accustomed to rule; in a word, of the great and overpowering Pitt.' pp. 28, 29. The various incidental avowals—that the writer is not a lawyer, that he is a man of high rank, that he is advanced in life, are all favourable to this conjecture, and to no other: it is possible they were inserted as clues, by which posterity might trace out the real author, when false pretensions and surmises were eventually disallowed. The author concludes with a negative argument of considerable weight, expressed however in his clumsiest manner.

'If Lord Chatham was not Junius,

"Where is he living, clipt within the sea,

"That chides the banks of England, Wales, and Scotland,"

who could personate him? If the dazzling combination of vigour, skill, talent, and elegance, which are *reflected* from the *lens*-like pages of this eloquent satirist, this political Juvenal, does not direct the admiring reader to this "cynosure of neighbouring eyes;" what other luminary had *fire*, *heat*, and light, powerful enough to *emanate* such splendour?'

By 'lens', we presume he means *mirror*; and by 'emanate', *emit*. What he means by 'fire', as distinguished from 'heat,' is not so easily imagined.

The concluding Dialogue between Lord Chatham and William Pitt, represents the father as on the whole approving the political life of the son.

It would not greatly surprise us to find there was ground for the suspicion, that we are indebted for this pamphlet to Mr. Adolphus.

Art. XVI. *A Sermon*, preached at the Baptist Monthly Association, in the Meeting-house, Little Prescot-street, Goodman's Fields, April 20, 1809. By Thomas Thomas. Published at the Request of the Associated Ministers and Brethren. 8vo. pp. 31. Price 1s. Button, Burditt. 1809.

WHAT is said of dreaming, is sometimes true of allegorical preaching; the fancy is awake, while the judgement is asleep. We are happy to assure our readers that no such reproach is due to Mr. Thomas. His discourse is not less judicious than ingenious, useful than interesting. The text appointed on this occasion, was Rev. i. 23. *The mystery of the seven stars, which thou sawest in my right hand.—The seven stars are the angels of the seven churches.* The term *angels* is, with propriety, exchanged for 'messengers'; a title, by which, it is supposed, the ministers of the gospel are designated. The subject is there-

fore stated as follows; 'the *messengers* of the seven churches compared to stars.' The use of this term is accounted for, in a sort of introduction, by a reference to the authority by which they are sent (and here the qualifications of a minister are noticed), and the commission they receive—to preach the gospel to every creature, and to exhort believers to their duty. The principal part, however, of the discourse is employed in explaining the four 'primary ideas' intended by the comparison of ministers to stars; they are *luminous*, *elevated*, *glorious*, and *useful* bodies. It may be easily imagined that various important doctrines and admonitions are introduced, in filling up this outline. The 'conclusion' derives several valuable lessons from the preceding remarks, suited to the case of ministers, churches, and Christians in general. The last division will afford some idea of the spirit and manner of the discourse.

'Let us feel our obligations to the good providence of God, for the light that shineth in our land. Ours has been not improperly called "the land of Bibles;" and it may be called *the land of Ministers.* For surely the many wise, holy, and faithful ministers, both in the establishment, and among the various denominations of dissenters, who "run to and fro," and through whom the knowledge of *Christ crucified* is increased in our land, are its glory. Blessed be the name of the Lord, that *Pagan* and *Popish* "darkness is past, and that the true light now shineth." May it be more widely diffused still. Let us pray that the gospel "may have free course and be glorified." That every city, every town, every village, every heart may be *filled* with the blessed doctrine. But who can help lamenting, that, while it is *day* with *us*, the *far greater part of the world* is in *midnight darkness!* Of how many large and populous nations may it be said, "Behold, darkness hath covered the earth, and gross darkness the people!" On them "neither sun nor stars appear," to shed their cheering light!

'Such, alas! is now the sad state of those once flourishing cities of the world, where *these golden lamps* were lighted up, and where *these bright stars* shone. O, blessed God, send out thy light and thy truth! Let thy Son be for "a light unto the Gentiles, that he may be for salvation to the ends of the earth."

'A few *stars*, glory be to God, have lately appeared in the *East*, and like the *star* that anciently guided the eastern *Magi*, *their* design is to direct to the Saviour who was born at Bethlehem.

'"Support them, O Lord, by thine almighty power, and guide all their motions by thine infinite wisdom" Amen.

Art. XVII. *General Redemption the only proper Basis of General Benevolence;* a Letter addressed to Robert Hawker, D. D. Vicar of Charles, Plymouth; suggested by his Defence of the London Female Penitentiary. By John Evans, A. M. 8vo. pp. 44. Price 1s. 6d. Sherwood and Co. 1809.

LIKE some other publications of this author, the work before us has a farther object than that which it professes. This duplicity of design, is rather unfortunate for his credit with a considerate reader. He brings his ability into question, by miserably failing in the purpose he *avows;* and his integrity, by zealously prosecuting another which he does *not* avow.

If any thing is to be understood from the title, it is that he will at-
npt to prove the doctrine of Particular Redemption, (viz. that Christ
d only for those who will eventually obtain eternal life) inconsistent
h the duty of General Benevolence, (viz. the duty of loving and
ving our neighbour as ourself.) This indeed is the most liberal con-
uction; to prove his proposition strictly, he must shew that among
hen nations there is *no* 'proper basis of general benevolence' In
s avowed design, we will venture to say Mr. Evans completely fails;
rather, we should say, scarcely attempts to succeed. It is no part of
duty to defend the doctrine of particular redemption, as held by
. Hawker, or Calvinists in general; but, whatever objections may be
dged against it from scripture, we are persuaded there is no incom-
ibility between this tenet, and the indulgence of the most enlarged
lanthropy. If Calvinists pretended, first, to know *who* were the
ividuals for whom the Saviour suffered; and then pretended some
riction of the law of universal charity to these ascertained objects of
ine mercy,—in this case, Mr Evans might have some colour for the
rge he affects to attach. But, as this is *not* the case; as no Calvi-
that we know of makes even *one* of these pretences, the attempt is
rly futile. Even if the first pretence *were* made, it would not involve
limitation of the duty of general benevolence.—The absurdity of
. Evans's charge is so evident, that we should be ashamed to say a
rd in confutation of it, except to a person of less than ordinary un-
standing. We will just remark, that if ever there was a man who
the obligation and performed the duties of universal benevolence,
man was JOHN HOWARD, a regular member of a dissenting church,
the Particular Baptist denomination, so called from their objection to
very doctrine of *General* Redemption.

But the principal part of this mean and disingenuous pamphlet is de-
d to an attaek on *other* doctrines maintained by Calvinists, and by
ost all other classes of Christians. Mr. E. is cautious not to make
objections too direct and explicit; he therefore adopts the method
insinuation and perversion, in opposing the doctrines of human de-
ity, conversion through the divine influence, justification by faith,
the final misery of the impenitent. On this last topic, he quotes
e very unjustifiable expressions of a writer named Reynolds, as if
were a just representation of the sentiments or mode of expression
ailing among Christians in general. To those who are versed in
Evans's writings, we scarcely need say that this pamphlet incul-
s, not indeed by frank and manly assertion, but by covert insinua-
the tenet of *universal restoration;* that it is crowded with disho-
able artifices of controversy, either affecting to dispute, against his
onents, opinions they do *not* hold, or affecting to maintain, against
n, propositions which they *do;* that it is adorned with garbled and
ted quotations from Doddridge, and other popular writers, to
e purposes which those writers would have abhorred; that it is care-
charged with eulogetic references to publications, that speak the au-
's sentiments in stronger language than he *dares*, or thinks it *politic*,
e himself; and that it is distinguished by a number of cant phrases
sentiments about liberality, candour, moderation, and the indiffer-
of religious sects and sentiments. It appears evident to us, that

Mr. Evans has selected the name of Dr. Hawker, and the subject of the Penitentiary, merely as a bait to public curiosity,—merely for the purpose of drawing attention to what he has to alledge against the generally received doctrines of the Christian faith. To say it is the worst of *all* his books, would perhaps be saying too much; but we do not scruple to assert that it is a performance, which few men, who have a reputation for sense or honesty, would care to acknowledge.

Art. XVIII. *The Indagator*; or the Lawfulness and Unlawfulness of Defensive and Offensive War considered: by which the true Warriour are contradistinguished from Pagan Heroes. Adapted to the present Times. By Sparkes Molitor, 8vo. pp. xxvii. 141. Price 5s. bds. Button, Hatchard. 1809.

THE chief excellences of *Friend* Molitor's book are—1st. A sublimity so obscure, that we have not been able to discover, whether his aim be to prove the lawfulness or unlawfulness of war:—2dly. An impetuosity so abrupt, that, to an ordinary person, he appears to draw inferences from premises that have never been laid down, and to lay down premises for inferences that are never to be drawn:—3dly. A reasoning so subtle that the vulgar eye discovers no connection between sentence and sentence, between subject and quotation:—4thly. A diction so recondite, as to serve for a veil, instead of a mirror, to thought,—a fine-wrought crust of Egyptian Hieroglyphic.—a 'gutta Phaëtontis,' where the mind and meaning of the author 'et latent and lucent.'

Lest we should be told our praise is not valid, as proceeding from persons who have not perused the work, we boldly affirm that we have read to the thirteenth line of the thirteenth page of the preface, and to the seventh line of the ninth page of the dissertation. Moreover, we can *prove our words*, by producing a literal quotation.

'The greatest folly in this world is, that men should *forbid* us to search for the *true* knowledge of God. The *eternal* beginning in the abyss is an eternal *will* in itself, whose original in itself, no creature shall ever know; yet we are to know, and it is given us to know, in the *spirit*, its ground: which it maketh to itself, wherein it rests. There was no creation performed till the creation of the *angels*: the ground or *cause* of this we are not to know; for God hath reserved it to his own power and might. Only of the creation we have ability to speak, because it is work in the *time*, and being or *substance* of God. And we understand that the *will* of the *word*, or heart of God, comprehended or comprised the astringent *fiat* in the centre of the Father's nature, together with the seven spirits and forms of the *eternal* nature, in the form and manner of the angelical thrones, where the austere or sourish *fiat* stood as *creator* in the property of each essence, as in the great wonders of God's wisdom; but not as a *maker*. pp, xii, xiii.

Art. XIX. *A Sequel to the Antidote to the Miseries of Human Life*, containing a further Account of Mrs. Placid and her Daughter Rachel. By the Author of the Antidote. 12mo. pp. 180. Price 3s. 6d. bds. Williams and Co. 1809.

WITH great pleasure we announce and recommend this publication. It deserves a longer review, but will soon be in our readers' hands

We are sincerely happy to find the excellent author meets with encouragement proportionate to her merits. Her writings are calculated, we think, to render essential service to the public. The purity of her attachment to the vital truths of Christianity is not debased by any admixture of party spirit; nor her usefulness cramped by an attention to subtle speculations or thorny controversies. She also embodies her instructions in a form which must attract attention; though marked with defects which may in some measure restrict their circulation among the higher classes of society. These defects are scarcely considerable enough to require a particular enumeration; it will be sufficient for us to intreat the author to take more, rather than less, pains, with any similar publications, which in future we may have the satisfaction of receiving from her pen.

Art. XX. *A Cursory View of Prussia, from the Death of Frederick II. to the Peace of Tilsitt;* containing an authentic Account of the Battles of Jena, Auerstadt, Eylau, and Friedland; as also other important Events during that interesting Period. In a Series of Letters from a Gentleman in Berlin to his Friend in London. 8vo. pp. 180. Price 3s. 6d. Robinson. 1809.

THIS publication is more of a historical, than a philosophical kind. It contains a tolerable sketch of the events which are well known to have resulted in the ruin of the Prussian monarchy, together with a small portion of additional information, which though in some measure interesting, is of no great importance, and brings with it no authenticity.

Art. XXI. *Original Poems intended for young Persons*, by Mrs. Richardson, Widow of the late Joseph Richardson, Esq. M. P. On a Plan recommended by the Rev. Dr. Isaac Watts. 12mo. pp. 132. Price 3s. Vernor and Co. 1808.

ON first opening this work, the reader is struck with the similarity of its title to that of 'Original Poems for Infant Minds,' a performance of extraordinary merit and deserved popularity. We hope there is no sinister *design* in this coincidence. The similarity between the two publications only extends to the title, the plan, and the general harmlessness; Mrs. R. has no pretensions to that happy taste, in the *selection*—that elegant artlessness, in the *expression*—of natural incidents, virtuous lessons, and tender sentiments, which have rendered the work of her predecessors a general favourite both in the drawing-room and the nursery.

Art. XXII. *The Adventures of Ulysses;* by Charles Lamb. 12mo. pp. 200. Price 3s. 6d. Juvenile Library. 1808.

THE substance of this work is of course taken from the Odyssey. It seems intended as a *companion* to the admirable tale of Fenelon; but in every respect, whether literary or moral, in point of sentiment or style, may more properly be considered as a *contrast*.

Art. XXIII. *The Hermitage*, or Views of Life and Manners. A Poem, with Notes. fcp. 8vo. pp. 105. Price 4s. Longman and Co. 1809.

IT was surely ill done to expose this 'Hermitage' to the public eye; we would recommend *our* readers, at least, not to be guilty of violating its sacred privacy, especially as we have found it to contain little else than some verse and dull prose on a variety of the tritest subjects.

ART. XXIV. SELECT LITERARY INFORMATION.

*** Gentlemen and Publishers who have works in the press, will oblige the Conductors of the* ECLECTIC REVIEW, *by sending information (post paid) of the subject, extent, and probable price of such works; which they may depend upon being communicated to the public, if consistent with its plan.*

GREAT BRITAIN.

Mr. Bowyer, of Pall Mall, intends publishing his splendid work on the Abolition of the Slave Trade, the beginning of next month; it will consist of Original Poems written by Montgomery, Grahame, and others, expressly for the occasion; and will be embellished with engravings from pictures by Smirke, and enriched with portraits of Mr. Wilberforce, Mr. Clarkson, and Mr. Granville Sharp.

Memoirs of the Life and Writings of Alfieri, the celebrated Italian Dramatist, will appear in the course of the present month. They are written by himself, and interspersed with Anecdotes of several distinguished Characters.

An Italian Work with a French translation, for the purpose of facilitating the acquisition of those languages, is in the press, intitled, 'Il modo di piacere in Compagnia', and consists of Conversations on a variety of Subjects.

The Rev. W. Ward, A. M. of Diss, has in the press the first volume of The Fulfilment of the Revelation, or Prophetic History of the Declensions and Restoration of the Christian Church; inscribed by permission to the Rev. Dr. I. Milner. This work will include a View of the different States of the Church, and a Body of Divinity, as well as an Ecclesiastical History in the order of Scripture Prophecy.

Shortly will be published Pursuits of Agriculture, A Satirical Poem, with Notes, Canto III. 2s. 6d.

Also, A Report of the Agriculture of Siberia, in one volume, 8vo. with Plates. By Mr. Macfarlane.

The Rev. John Hammond, Rector of Sunderland, has a Volume of Sermons in the press, which will be published about the middle of winter.

Shortly will be published, Strictures on "Zeal without Innovation," reprinted by permission from the Eclectic Review for June, July, and September, 1809. Price 1s.

The Rev. James Parsons has undertaken to publish the remaining collations of the Septuagint, prepared by the late Dr. Holmes.

The Rev. H. H. Baber, of the British Museum, will soon publish, in a quarto volume, an edition of Wickliff's Version of the New Testament; with a Life of the celebrated reformer, and an Essay on the Anglo-Saxon and English Translations of the Scriptures previous to the fifteenth Century.

A new edition of Ernesti's Cicero is printing at Oxford; the Clavis to be sold separately, if wanted.

A new edition, with improvements, of Tables for Navigation and Nautical Astronomy, by Joseph de Mendoza Rioz, E. will shortly be published.

Retribution, or the Sicilian Vespers, a Romance of the thirteenth Century, not inapplicable to the Nineteenth, will soon appear in three volumes, 12mo.

Mr. Robert Huish is engaged in the Translation of the Sacred Dramas of Klopstock, the first of which, intitled Solomon, will appear in the course of the ensuing month. Mr. Huish has also completed his Poem of the Peruvians, in ten Cantos, which will be published this year.

In the press, the Genealogy of the Earls of Sutherland, from the Original of that illustrious House to the Year 1630, with the History of the Northern Parts of Scotland during that period, by Sir Robert Gordon of Gordonstoun, Baronet; continued to the year 1651, by Gilbert Gordon of Sallagh. Published from the original manuscript in the Possession of the Marchioness of Stafford. Handsomely printed in folio. It is said to be not only an accurate genealogical History of the Ancient House of Sutherland, but also a minute detail of the principal transactions which occurred during a period of near 600 years, particularly in the counties of Sutherland and Caithness and the Highlands of Scotland in general. The history of these parts, it is presumed, will receive more elucidation from this work than from any which the public is at present possessed of. The whole has been carefully transcribed by the kind permission of the Marchioness of Stafford, from the original manuscript preserved at Dunrobin Castle. An Appendix will be added, containing an inventory of the writs of the earldom.

ork will be illustrated by several en-
ngs.

. Faulkner of Chelsea is preparing for
ress a Historical, Topographical and
tical Description of Chelsea and its
ons, which will be dedicated, by per-
n, to the Bishop of Winchester.

. Marshall will shortly publish a Re-
f the Reports to the Board of Agri-
e from the Western Department of
nd.

Works of Gawin Douglas, Bishop of
ld; with Historical and Critical Dis-
ons in his Life and Writings, Notes,
Glossary. By the Right Hon. Syl-
(Douglas) Lord Glenbervie, 4 vols.
e now in the press. The whole Works
in Douglas, consisting of his transla-
Virgil's Æneid, The Palace of Ho-
and King Hart, are now for the first
llected into one edition. Two Dis-
ons, the one on the family of Douglas,
er on the Poet's Life and Writings,
prefixed and copious Notes added.
ext of Ruddiman's Edition of the
has been collated with the following
anuscripts: viz. two in the Library of
iversity of Edinburgh, one in that of
ulty of Advocates, a fourth in the
ion of the Marquis of Bath at Long-
leat, and the fifth at Lambeth Palace. The excellent Glossary of Ruddiman is made the basis of that in the present work, but considerably enlarged, and extended to the other Poems.

Mr. James Johnson of Lancaster is preparing for publication, in a quarto volume, the History and Antiquities of the Hundred of Lonsdale, including the stations of Lancaster and Overborough.

The second volume of Manning's History of Surrey is expected to appear in the course of next month.

The Rev. Edward Berwick has nearly ready for publication, an entire translation of the Life of Apollonius of Tyanea, from the Greek of Philostratus.

Dr. Carey has in the press a Sequel to his English Prosody and Versification, intitled Poetic Reading made Easy, containing a Selection of Poetry for Schools, with Directions for the utterance of each line.

Mr. Robert Clutterbuck of Watford is engaged in collecting and arranging Materials for a History of Hertfordshire, taking Chauncey for his guide.

The seventh edition of Mr. Kett's Elements of useful Knowledge will appear next month.

XXV. LIST OF WORKS RECENTLY PUBLISHED.

ICULTURE AND RURAL ECONOMY.

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Animals, in a Letter addressed to
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bright, M. P. 2s. 6d.

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taining, also, a comparative View of the Structure of Fungus Haematodes and Cancer, with Cases and Dissections. By James Wardrop, F. R. S. E. Fellow of the Royal College of Surgeons, and one of the Surgeons of the Public Dispensary of Edinburgh. Illustrated by Plates. 8vo. 12s. boards. A few copies are printed on royal paper, with the plates coloured, price 1l. 1s. boards.

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TO CORRESPONDENTS.

We thank *Amans Prudentiæ* for his respectful and candid letter. The article, after he inquires, has been delayed by causes widely remote from those which he surmise

A 'Critic' may be assured that we have not lost sight of his object.

ERRATA.

Page 376. l. 9. *for* his *read* the.
567. l. 2. *from bottom, for* complacently *read* complaisantly
610. l. 11. *for* 21st. letter *read* 21 letters.
678. l. 10. *for* προσειπε read προσειπε.
796. l. 28. *before* 197 *insert* III.
797. l. 19. *for* should be *read* should not be.
906. l. for *Chemie* read *Chimie.*